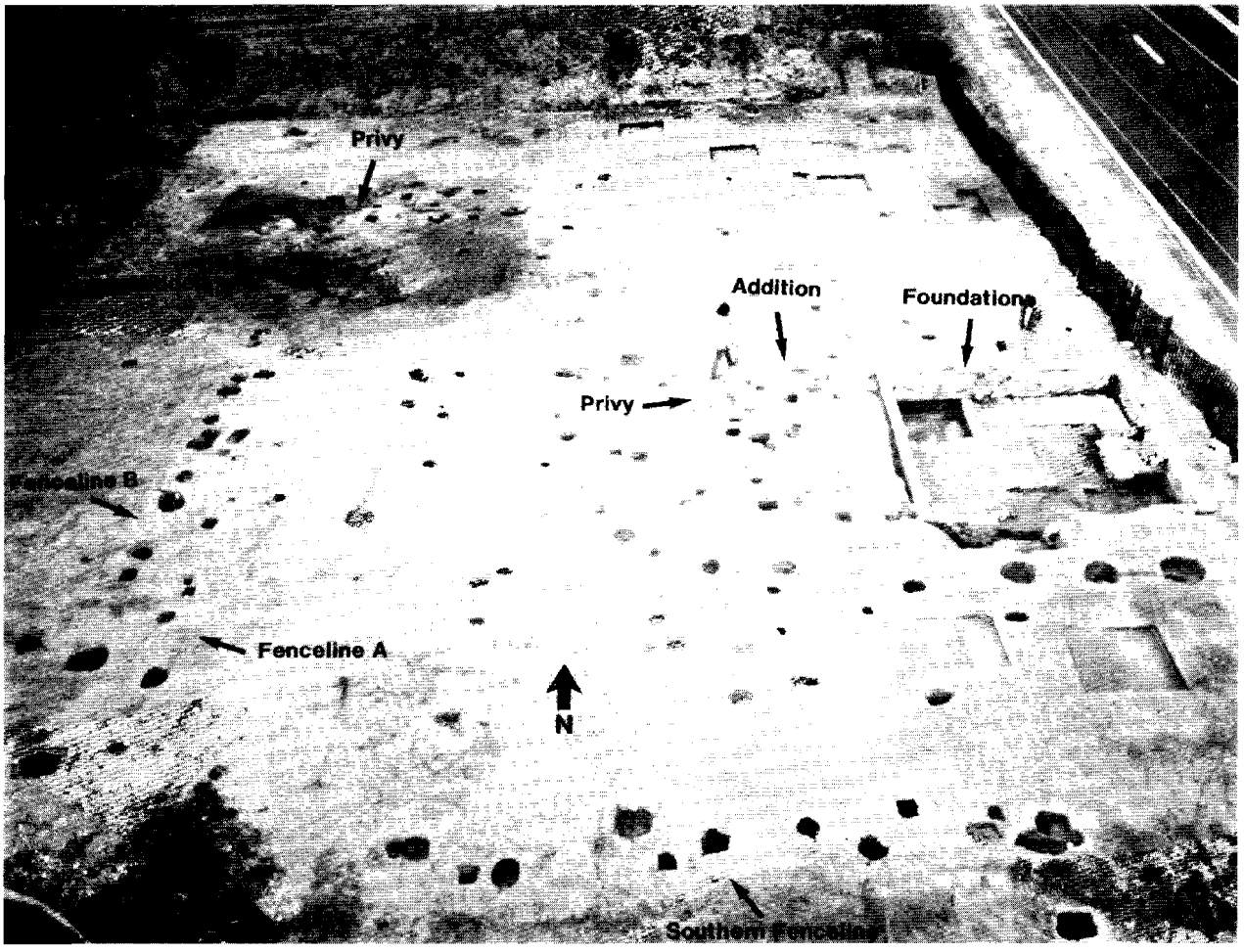
STATUS, LANDSCAPE, AND TENANCY AT MOUNT VERNON PLACE: FINAL ARCHAEOLOGICAL INVESTIGATIONS OF THE JACOB B. CAZIER TENANCY SITE #2, STATE ROUTE 896, NEW CASTLE COUNTY, DELAWARE



by
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UNIVERSITY OF DELAWARE
Department of Anthropology
Center for Archaeological Research

Delaware Department of Transportation Archaeology Series No. 104

Eugene E. Abbott
Director of Planning

Delaware
Department of Transportation

1994

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Federal Highway Administration

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ABSTRACT

The Jacob B. Cazier Tenancy Site No. 2 (7NC-F-64) is a late nineteenth - early twentieth century tenant site located in Pencader Hundred, New Castle County, Delaware. The site had been determined to be eligible for listing on the National Register of Historic Places and was scheduled to be destroyed during the expansion of State Road 896. Phase III data recovery excavations were undertaken to collect important data before the site's destruction. A brick house foundation and cellar and more than 200 features including an addition to the house, privies, outbuildings, and fencelines were excavated. Artifact analysis and archival research showed that the site was occupied by unnamed tenant farmers (1844-1880s), and black laborers (1880s-1934). Data from the excavations, archival research, and informant interviews show a shift in the site's use during the early twentieth century when it was transformed from a large estate's gate house to a simple rural tenancy.

Cover Illustration: Overview of Cazier Site Excavations. View is looking north. State Route 896 is visible in the upper right corner and the house foundation is visible on the right center section of the photograph. Privy features and fencelines are also visible.

DelDOT Archaeological Series Index Information

This form is intended to provide information on the contents of this volume for indexing. It is also intended for researchers to use to check the research methods and topics included in this volume.

Report Title: **STATUS, LANDSCAPE, AND TENANCY AT MOUNT VERNON PLACE: FINAL ARCHAEOLOGICAL INVESTIGATIONS OF THE JACOB B. CAZIER TENANCY SITE NO. 2, STATE ROAD 896, NEW CASTLE COUNTY, DELAWARE**

DelDOT Report Number: **104**

Level of Investigations: [Phase I, II, III, Planning Survey, Specialized Study]

Phase III

Basic Time Periods Covered:

_____ All prehistoric
_____ Mainly prehistoric, some historic
_____ Equal coverage of prehistoric and historic
_____ Mainly historic, some prehistoric
__X__ All historic

Site Contexts:

	Prehistoric	Historic
Plow zone/disturbed surface soils		X
Intact features		X
Buried artifact-bearing strata		

List up to five major time periods or site types

1. **TENANT FARM**
2. **NINETEENTH AND TWENTIETH CENTURIES**
3. **AFRICAN AMERICAN SITE**
4. **LABORER'S DWELLING**

List up to eight major topics covered in Conclusions and Discussions of Results

1. **YARD PROXEMICS**
2. **COMPARISONS OF HISTORIC BUILDING SIZE**
3. **CERAMIC VESSEL FUNCTION COMPARISONS**

4. **GLASS VESSEL COMPARISONS**
5. **CONSUMER PATTERNS**

Specialized Analyses Undertaken

	Prehistoric	Historic
Blood Residue		
Ceramic Chronology		
Ceramic Vessel Surface Alterations		
Cordage Twists from Ceramic Impressions		
Faunal Analysis		X
Flake Attributes		
Floral Analysis		X
Flotation		X
Geomorphology and Pedology		
Glass Analysis		X
HABS Documentation		
HAER Documentation		
Historic Architecture		
Informant Interviews		X
Leather Analysis		
Miller Ceramic Index		
Mortar Analysis		X
Palynology		
Projectile Point Chronology		
Projectile Point Function		
Radiocarbon Dates		
Soil Chemistry		X
Spatial Distribution of Artifacts		X
Stone Tool Functional Analysis		
Wood Identification		

List up to 5 other specialized analyses not listed above:

NOT APPLICABLE

Geographic Area Covered

- X New Castle County
- ___ Kent County
- ___ Sussex County
- ___ All State

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Aerial View of Project Area

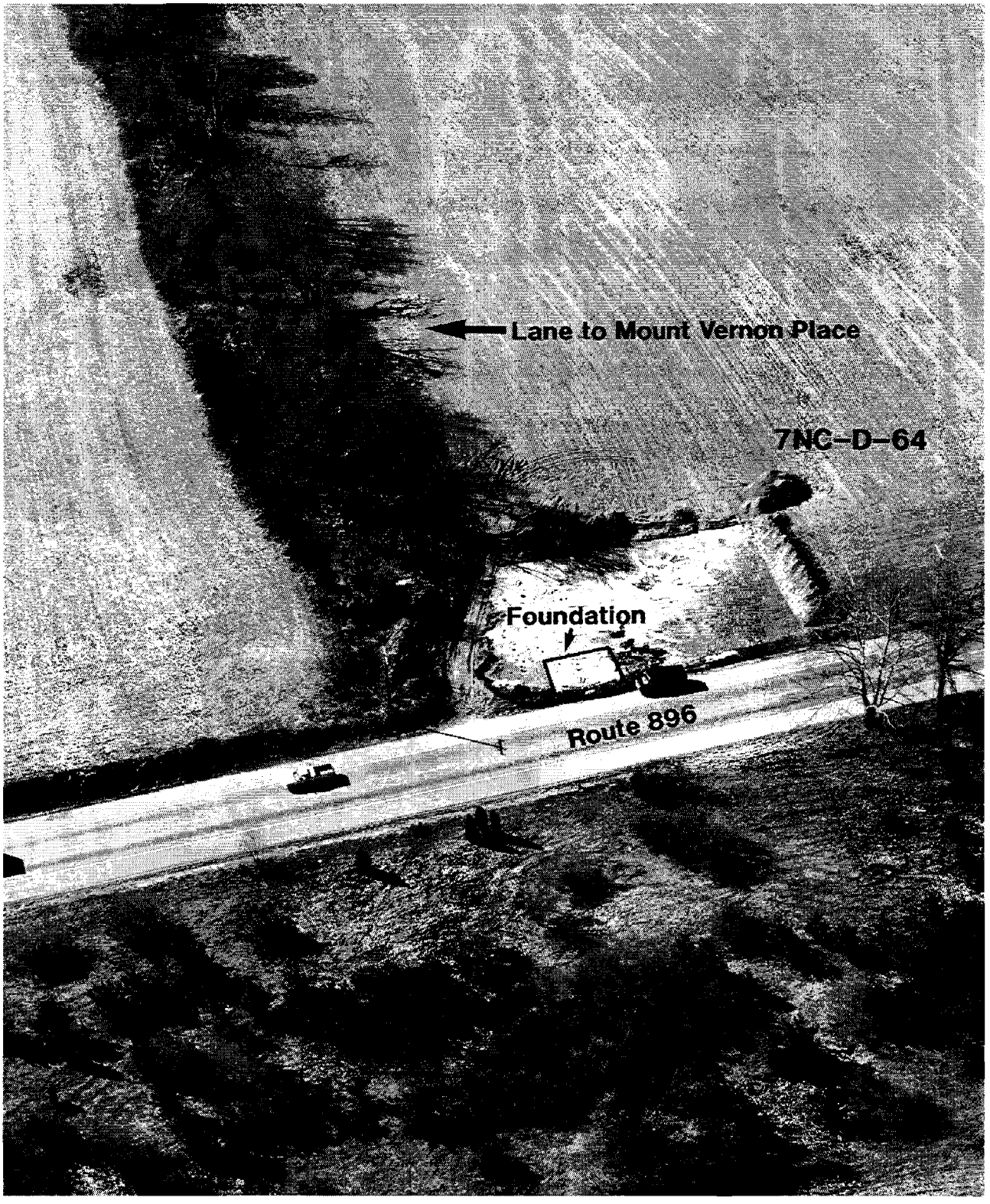
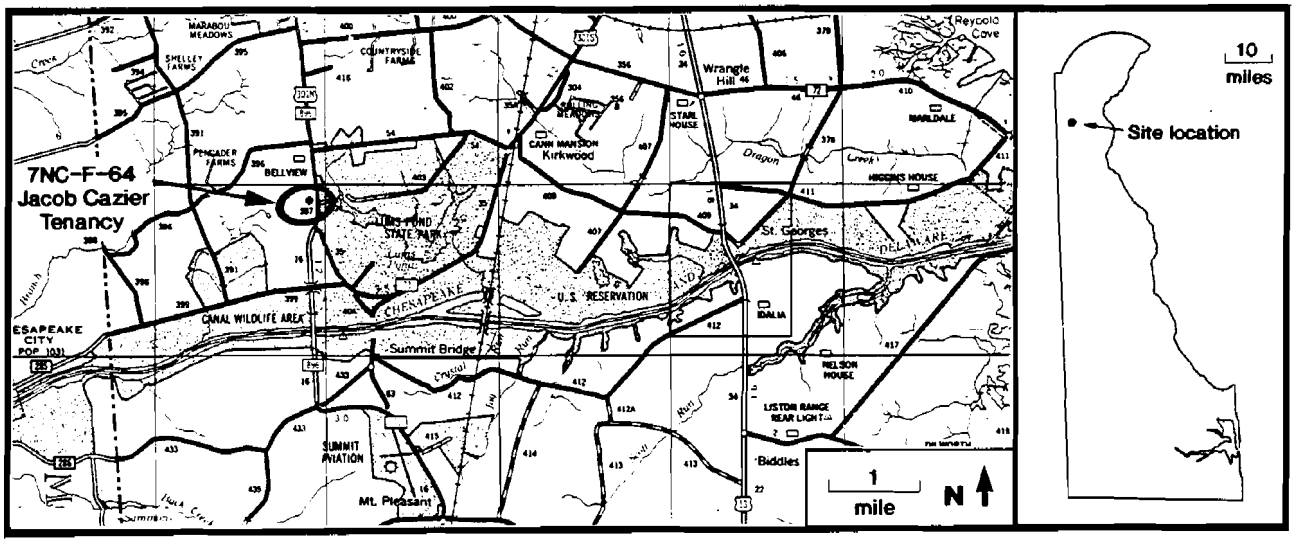


FIGURE 1
Site Location Map



INTRODUCTION

This report presents the results of Phase III data recovery excavations at the Jacob B. Cazier Tenancy site #2 (7NC-F-64, herein after referred to as the Cazier site), near Glasgow, Pencader Hundred, New Castle County, Delaware (Figure 1; Plate 1). Data recovery excavations focused on an historical occupation dating from the mid-nineteenth to the early twentieth centuries. Fieldwork, artifact analysis, and report preparation were carried out between January 1990 and March 1993 by archaeologists from the University of Delaware Center for Archaeological Research (UDCAR). The project was funded by the Delaware Department of Transportation (DelDOT) and the Federal Highway Administration (FHWA), to fulfill regulatory obligations under Section 106 of the National Historic Preservation Act (amended).

The Cazier site was identified in 1985 as a result of a Phase I reconnaissance survey and subsequent Phase II investigations of the site (Lothrop et al. 1987:121-148). Jacob Cazier owned three tenant houses in the area, but the Cazier site (in this report referred to as the Cazier site) was the only one of his tenant properties located within the project area. The field investigations conducted at the Cazier site revealed the presence of an intact house foundation (thought to have been 22' x 16') and associated features below the plow zone. Datable cultural materials suggested an occupation from the mid-nineteenth into the early twentieth centuries, corroborating background research indicating that the structure was demolished in the early 1900s (Lothrop et al. 1987). Central portions of the site, including the foundation and several associated features, were located within the direct impact zone of the proposed construction of Route 896.

Based on the results of the Phase I and II investigations, the Cazier site was considered to be eligible for inclusion to the National Register under Criterion "D". The site provided data for comparison with other previously excavated tenant sites in Delaware and constituted a resource for the study of spatial patterning of black households before and after the turn of the twentieth century, an area that has received little attention from archaeologists to date (Lothrop et al. 1987:80).

In the following pages, the Cazier site will be discussed in terms of its environmental setting, its relation to regional historical developments, and site specific historical research. Field methods, research goals, and statewide research domains as defined by the Management Plan for Delaware's Historical Archaeological Resources (De Cunzo and Catts 1990) will be presented, followed by the results of the excavations. Artifact analyses, soil analyses, and site

interpretations from both intra-site and inter-site perspectives will be presented. The final section of the report will conclude with a discussion of the Cazier site from both local and regional viewpoints.

ENVIRONMENTAL SETTING

The Cazier site is located in the High Coastal Plain of Delaware, just south of the Piedmont Uplands (Custer 1984:25; Lothrop et al. 1987:6-11). Located between the Fall Line and the Smyrna River, the High Coastal Plain represents the southeastern extension of the very coarse glacial deposits of the Columbia sediments. In many areas, these coarse deposits resisted erosion, creating a rolling topography with up to 50 feet (16 meters) of elevation difference between headlands bordering larger streams and the adjacent floodplain marshes. Water courses tend to be deeply incised and are lined with a veneer of relatively recent sediments that are thin along the upper reaches of the drainages and become thicker toward their mouths.

The Piedmont in northern Delaware is composed of an assortment of crystalline rocks of igneous and sedimentary origin which were heavily metamorphosed during later Precambrian or early Paleozoic progenies. In the western part of the Delaware Piedmont, micaceous schists, gneisses, and migmatites of the Wissahickon formation predominate (Spoljaric 1972:3). The crystalline rocks slope to the south and southeast, forming a basement over which the wedge-shaped mass of sediments of the Upper Coastal Plain lie.

Resting on this basement complex and surrounded by Coastal Plain sediments are Iron and Chestnut hills, the most salient features of the Piedmont in the immediate vicinity of the Cazier site. Located about four miles north of the site, the hills rise over 300 feet in elevation above the immediate Coastal Plain, and are composed of primarily igneous materials, including gabbro, norite, and pyroxenite (Spoljaric 1972:11). In addition, siliceous jasperoids are also present within these formations, probably derived through the formation of laterites. The igneous materials which comprise Iron and Chestnut hills do not extend into the basement complex and thus postdate it. The exact nature of the origin of these hills is still open to question (Ward 1959). In prehistory, the Iron Hill and Chestnut Hill jasperoids constituted an important source of lithic material for the manufacture of stone tools (Custer, Ward, and Watson 1986). Historically, these hills were mined for their iron ore during periods of the eighteenth and nineteenth centuries (Owen and Owen 1973; Heite 1983).

The Cazier site is located in an agricultural field on a slight rise (about 80 feet above sea level) on the west side of Route 896, approximately 1000 feet north of the Chesapeake and Delaware Canal. Soils in this portion of central New Castle County are generally of the Sassafras-Fallsington-Matapeake association, which consists of level to gently-rolling upland settings with well- to poorly-drained, moderately coarse- to medium-textured soils. This association makes up about 12 percent of New Castle County soils, and although not of the highest quality for agriculture, these soils are suitable for farming. At the Cazier site the soils are of the Sassafras Sandy Loam Series, with five to ten percent slopes and moderate erosion. The soil is generally easy to work and farm, and native vegetation consists of water-tolerant hardwoods, primarily oaks and gums (Matthews and Lavoie 1970:5,38).

The area surrounding the Cazier site is presently undergoing a tremendous construction boom. New housing developments and corporate centers are being built throughout the area, resulting in the destruction and loss of irreplaceable agricultural land and the rural landscape.

REGIONAL HISTORY

The focus of the regional history will be on the Cazier site and its locality in Pencader Hundred, New Castle County, Delaware. The Cazier site was originally part of a larger farm, "Mount Vernon Place," located in Pencader Hundred. The property owners had associations with the nearby communities of Glasgow, Summit Bridge, and Kirkwood. Brief histories of these communities will be integrated into a discussion of larger scale regional developments effecting the growth of Pencader Hundred. More detailed discussions of regional historical and cultural developments have been presented in other recent historical and archaeological publications, and these should be referred to for additional historical materials (Catts and Coleman 1986:3-21; Basalik et al. 1987:4-31; Coleman et al. 1987; Catts and Custer 1990:14-29).

The area surrounding the Cazier site was originally part of William Penn's 30,000 acre grant called the Welsh Tract. This tract was given to a group of Welsh settlers in October of 1701, and included portions of present-day Pencader Hundred in New Castle County. The Welsh colonists were induced to migrate to the Pencader area because of the large amount of iron ore deposits present in and around Iron Hill, Chestnut Hill, Sandy Brae, and Gray's Hill. The name "Pencader" has been translated as meaning "high seat" in Welsh, and the land around Iron Hill allegedly reminded these Welshmen of their homes in south Wales near Pembroke (Owen and Owen 1977:4).

The Welsh settlers established the Welsh Tract Baptist Church, the oldest Primitive Baptist Church in the United States, in 1703 (Roberts 1978), and the Pencader Presbyterian Church between 1701 and 1710 (Skinner 1899). The Pencader Presbyterian Church formed the basis for the development of the village of Glasgow. Henry and Sarah Cazier were received into the Pencader Presbyterian Church membership in 1833. Following the destruction of the church by fire in 1852, Henry Cazier took an active part in the erection of a new church building. Cazier's substantial donations to the rebuilding fund led to the completion of the construction (Cooch 1936:102). In 1854 Cazier was elected as a Ruling Elder on the Board of Trustees of the Presbyterian Church.

The village of Glasgow, formally established in 1791, was the oldest community associated with the Cazier site. During the American Revolution, the crossroad location was known as Aiken's Tavern, after the tavern kept by John Aiken. At that time the only substantial buildings in the village were the Pencader Church and the tavern. The British utilized the tavern as General Howe's headquarters in early September 1777, after the skirmish at Cooch's Bridge and prior to the march to Brandywine.

The end of the Revolution brought a certain degree of economic prosperity to the region. By 1800, the U.S. Census stated that the village of "Eakin Town" contained 25 dwellings and had 159 inhabitants (Rogers and Easter 1960:52). Besides an increase in housing stock and population, Glasgow witnessed the development of a street system at the end of the eighteenth century. The establishment of the New Castle and Frenchtown Turnpike in 1809 through Glasgow assured the Village's growth (Moreau de St. Mary 1947:85).

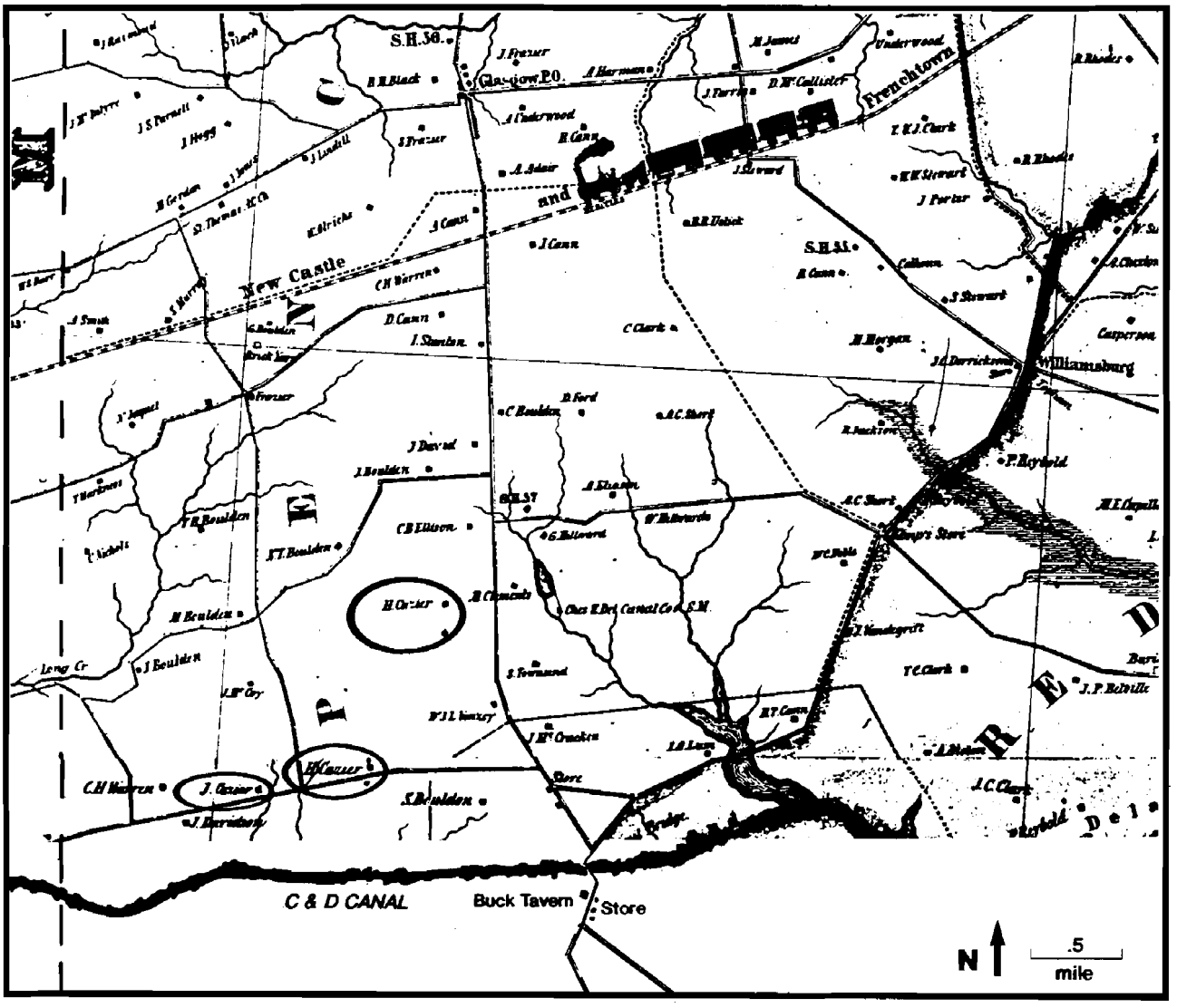
The principal north-south route through Pencader Hundred, known as the Newark Road or Glasgow Road, ran past the Pencader Church and was in existence from at least the mid-eighteenth century. The road was the ancestor of modern-day Route 896 and extended from Newark south to Buck Tavern in St. Georges Hundred (Figure 2). The Cazier site was situated along the Newark Road (Route 896), two miles south of Glasgow.

The small feeder roads leading from the Newark-to-Glasgow Road (Route 896) were not in place before the mid-nineteenth century. The road leading from the village of Summit to Gilbert's Corner (Kemp's Store or Kirkwood) was laid out in 1849 (Figure 2; New Castle County Court of General Sessions, Road Books for 1846-1857). In May of 1850, a private road was laid out that led from Newark Road (Route 896) to "Little Jersey" and was called the Lums Pond Mill Road. Ending near Henry Cazier's gate at "Mount Vernon Place," the road served the new community of Little Jersey, shown on Beers' Atlas of 1868 (Figure 3; New Castle County Court of General Sessions, Road Books for 1846-1857). Little Jersey may have been inhabited by workers of the Chesapeake and Delaware Canal, because the land was owned by that organization. One of Jacob Cazier's black employees moved to Little Jersey in the early twentieth century.

The Pencader Hundred area was, until quite recently, predominantly agricultural. Milling constituted the major industry in the area, with mills located at Cooch's Bridge, on Muddy Run, and the Chesapeake and Delaware Canal Saw Mill on a tributary of Lum's Pond, directly east of the Cazier site (Figure 2). In addition to milling, the mining of iron ore from Iron Hill and Chestnut Hill formed an important industry for the area for a period of time. Iron ore was mined from the Abington Iron Works from the early 1720s for only a decade. In the nineteenth century the ore pits were reopened for mining until the 1880s (Owen and Owen 1977).

Excavation of a cross-peninsular canal began in 1824 and was completed in 1829. The Chesapeake and Delaware Canal connected the Delaware and Chesapeake bays. The "C and D Canal," as it became known, was located less than one mile south of "White Hall," the homestead farm of Henry Cazier and two miles south of Cazier's other large property "Mount Vernon Place" (Figure 3). When contractors failed to stop the soil removed from the canal's

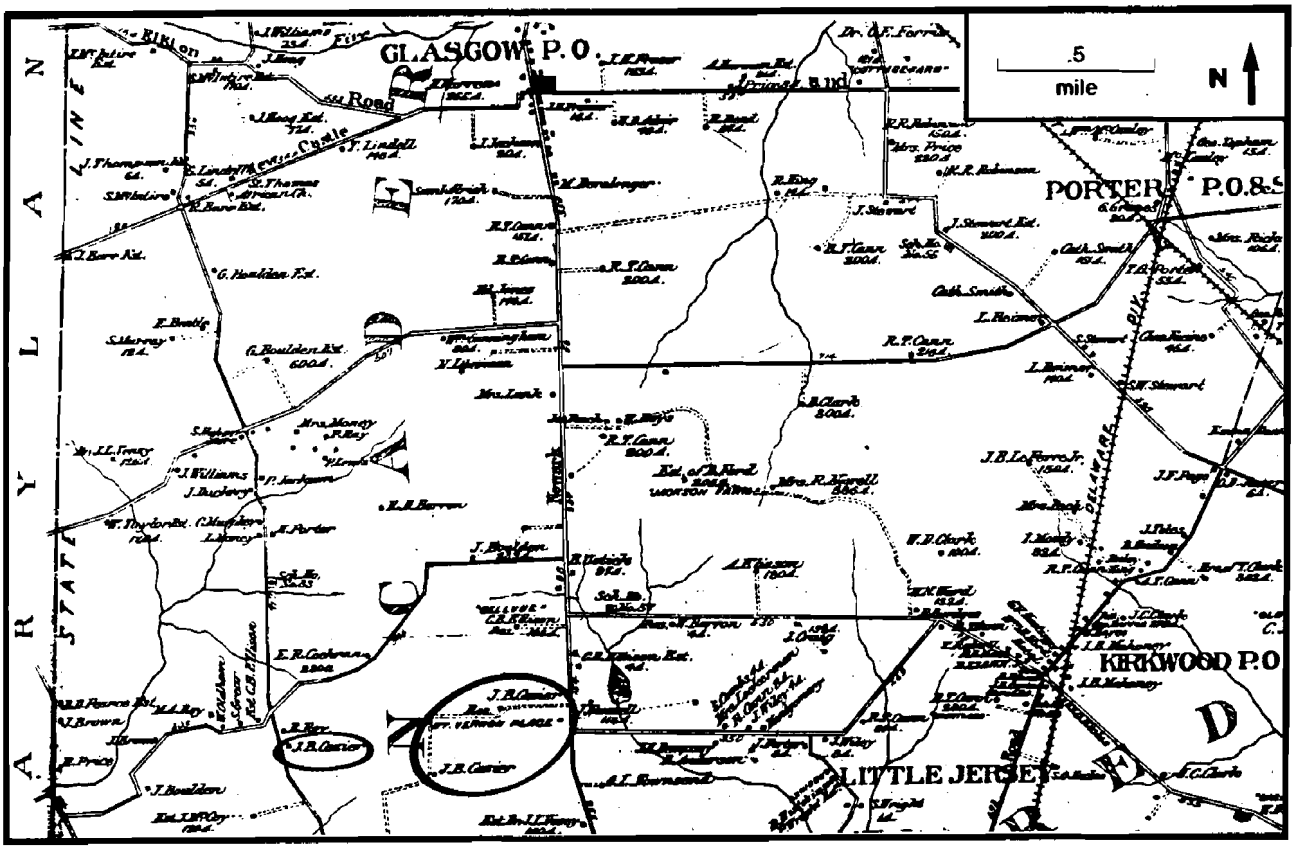
FIGURE 2
Rea and Price Map of New Castle County, 1849



cut from sliding back into the cut, Henry Cazier "undertook the contract at a price reflecting the hazard of the undertaking." Cazier easily finished the job at a handsome profit (Cooch 1936:103). Although Cazier benefited monetarily from the construction of the canal, improved transportation ultimately contributed to the economic decline of several communities. Goods previously shipped overland across the peninsula could now be sent more cheaply by water and trade languished in Christiana, Newport, Stanton, and New Castle. Ironically, it was the canal that led to the ruin of Cazier's homestead farm in the 1920s, when the federal government bought the farm and razed "White Hall" and several outbuildings. The canal was widened and the enormous quantity of spoils taken from the deep cut was deposited over the fields of the Cazier farm (Cooch 1936:105).

By 1825, one year after the initial construction of the canal, the village of Summit Bridge was the site of a post office. Prior to that date the village was known as the Buck Tavern (Wilkins and Quick 1976:55). The village was called Jesterville in 1849, but was also known as Summit Bridge, because of its location south of the canal and

FIGURE 3
Beers' Atlas of Glasgow and Pencader Hundred, 1868



because it was situated at the highest point on the Peninsula between the Chesapeake Bay and the Delaware River (Scharf 1888:958). A high bridge was constructed over the canal on the road that led from the Buck Hotel to Kirkwood (Figure 3). The Buck Tavern was located on the upper King's Road since the late eighteenth century (Scharf 1888:958). By 1868, the town of Summit Bridge contained a church, two blacksmith-shops, three stores, the Delaware Wagon Works, and fifteen residences, as well as the tavern and post office.

Local residents referred to the village as "The Buck", and to the present-day Route 896 as "the road leading from The Buck to Glasgow" (Cooch 1936:104). Cooch (1936:85) attributed the separate but synonymous names for Summit Bridge, as well as other communities, to the observation that "the smaller the community, the more names it accumulates."

Railroads came to New Castle County in the 1830s. The first line, the New Castle and French Town Railroad, was constructed in 1832 as a direct result of the opening of the Chesapeake and Delaware Canal, and was an effort to compete with that transportation route (Hoffecker 1977:43). In 1838, the Philadelphia, Wilmington, and Baltimore Railroad was completed, and quickly became the major transportation route across the peninsula. Throughout the remainder of the nineteenth century, rail lines continued to be built in northern New Castle County, such as the Baltimore and Ohio, the Wilmington and New Castle, and the Wilmington and Western railroads. Locally, the advent of the railroad, and with it cheaper and more efficient means of transporting goods and produce, marked the end of many small market towns.

Other small towns benefited from railroad transportation. One such town was the crossroad village of Gilbert's Corner or Kemp's (Store) Corner, a very small hamlet containing one store by mid-century (Figure 2). The road leading from Gilbert's Corner to Summit was laid out in 1849 (New Castle County Court of General Sessions). The discontinuation of the New Castle and Frenchtown Railroad in 1851 and the subsequent construction of the Delaware Division of the Philadelphia, Wilmington, and Baltimore Railroad contributed to the growth of Kemp's Corner. The railway passed through the crossroad village by 1868. By this time, Kemp's Corner was known as St. George's Station and provided rail service and a post office to the surrounding area. The town's name was changed from St. George's Station to Kirkwood in 1862 in honor of Colonel Robert Kirkwood (Scharf 1888:958).

The Delaware State and Peninsular Directory for 1872 reported that Kirkwood was "fast becoming a place of considerable importance," and listed Jacob B. Cazier as a farmer in the community. The 1882 directory described Kirkwood as:

> A station of the Delaware Division of the Philadelphia, Wilmington, and Baltimore Railroad, 14 miles from Wilmington and eight miles from Middletown.
>
> The land around here is, perhaps, in point of natural fertility and high cultivation, the best in the State, and will compare favorably with any elsewhere. From 60 to 80 bushels of corn and 25 to 35 bushels of wheat per acre are common crops. Many peaches are also raised here, as well as other fruits, this being the northern end of the great fruit region of Delaware, although struggling orchards continue a few miles further north.
>
> Stage lines furnish communication with St. Georges and Delaware City, from which point water communication can be had with both Baltimore and Philadelphia via the Chesapeake and Delaware Canal, and the Ericsen line of steamers, and the Delaware Railroad furnishes communication with all points north and south. Land can be bought for from $20-$50 per acre, although the best and most highly cultivated farms bring $100-$150 per acre (Delaware State and Peninsular Gazetteer Directory, 1882:173).

The 1882 directory did not provide the population of Kirkwood, but listed the names of the townspeople and their occupations. The village offered residents and travelers a depot for passengers and freight, blacksmith and wheelwright-shops, a hotel, a butcher, two carpenters, a plasterer, a grain dealer, two coal dealers, a druggist, a dry goods store, a general store, a general and agricultural implement store, a shoemaker, and a constable (The Delaware State and Peninsular Gazetteer for 1882:173).

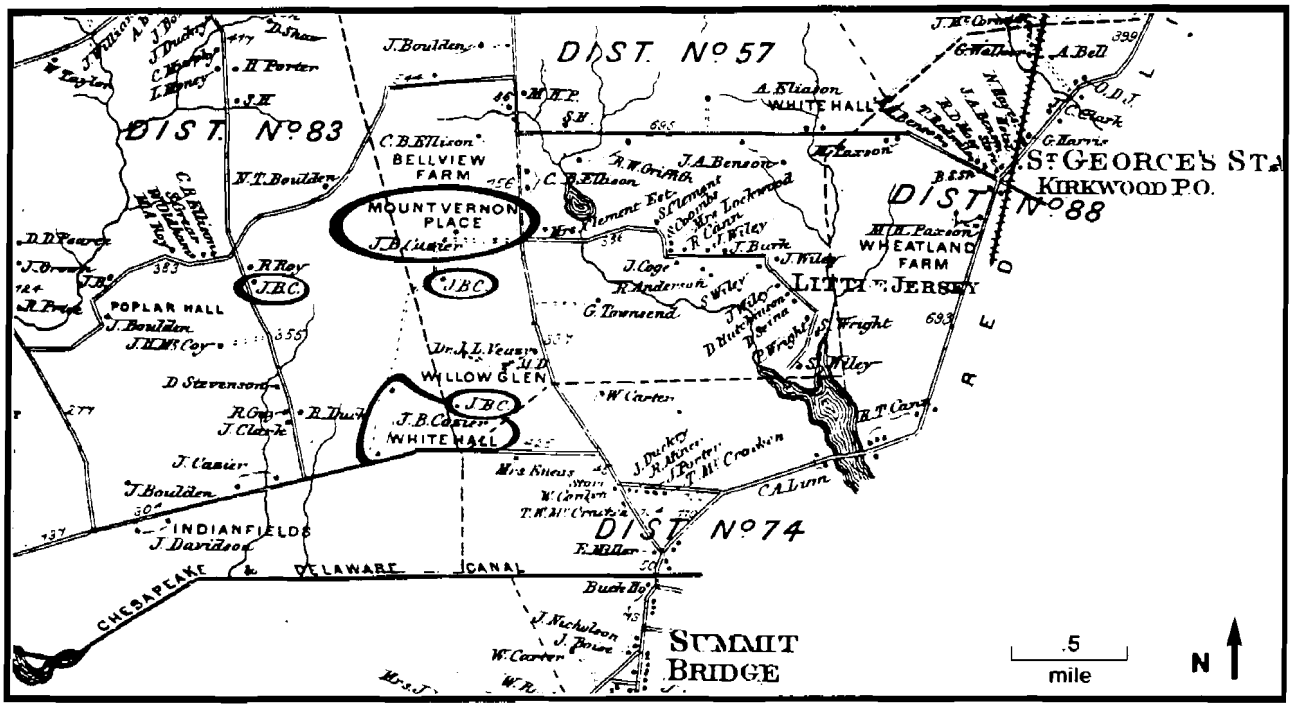
By 1884, 50 people lived in Kirkwood. New businesses, including a post office, a wagon works and a lumber yard had been built since 1882 (Delaware, Maryland, and West Virginia State Gazetteer and Business Directory for 1884:96).

By 1888, the population of Kirkwood had grown to 150 people. The 1888 directory listed 20 laborers, a section boss, three telegraph operators, a bridge-tender and an assistant bridge-tender, a postmistress, a dentist, and a school teacher (Delaware State Directory and Peninsular Gazetteer for 1888:145-146). Baist's Atlas of 1893 depicted the increase in dwellings centered around the crossroads at Kirkwood (Figure 4).

By 1894, Kirkwood had 217 residents, including 33 laborers, 37 farmers, and one trapper. Jacob B. Cazier was listed, but no occupation given (Delaware State Directory for 1894-1895:181). Six years later, in 1900, the population of Kirkwood remained 217. A slight decrease of the number of laborers was evident; 29 laborers were listed (Delaware State and Peninsular Directory for 1899-1900:135-136).

Although the number of structures within the village of Kirkwood depicted on Baist's 1893 atlas and the 1906 USGS Quadrangle Map (Figures 4 and 5) remained constant, a sharp decline in Kirkwood's population was evident in the Directory of 1908. One hundred and twenty-five people were living in the village. Jacob Cazier was listed as a farmer, along with the names of 18 other farmers in the area (R.L. Polk and Company's Peninsular Directory of Delaware for 1908:155).

FIGURE 4
Baist's Atlas Map of Pencader Hundred, 1893



Tenant farming, which had been quite common in the eighteenth century, became even more prevalent during the nineteenth century. Large landowners, having acquired much of their holdings during the hard times of the 1820s and 1830s, leased their lands to tenants. Most landowners were white farmers, while some tenants and farm laborers, particularly in Kent and Sussex counties, were black. By 1900, over 50 percent of all the farmers in Delaware were tenants or sharecroppers (Shannon 1945:418). Tenancy remained a dominant farming practice into the twentieth century (Bausman 1933:165).

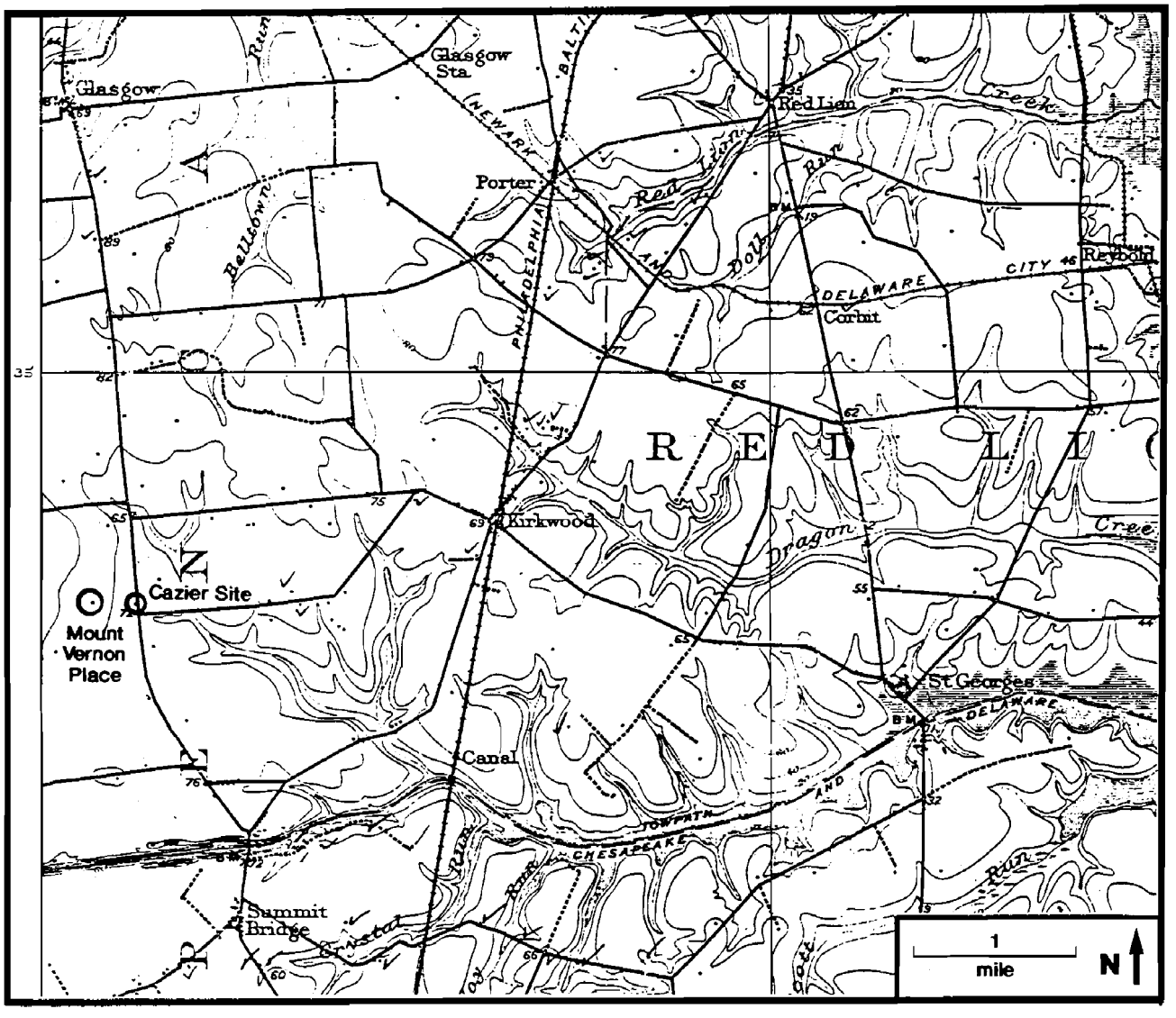
Henry Cazier and his son, Jacob B. Cazier, were two of the largest landowners in Pencader Hundred. Beers' Atlas of 1868 (Figure 3) exhibited six properties owned by Jacob Cazier. Other large landowners were neighbors of the Caziers — R.T. Cann, Cantwell Clark, and J. Boulden. Cazier's holdings were remarkable for their extent. At 3,000 acres, Cazier was one of the largest landowners in the Kirkwood area where the average farm size was only 200 acres. Only one other man, R.T. Cann, owned 3,000 acres (Delaware State and Peninsular Gazetteer Directory for 1882:173). Cazier and Cann together owned sixty percent of the total acreage owned by nineteen farmers listed in the Kirkwood area at that time (Table 1).

The landscape portions of Pencader Hundred around the Cazier site has recently been altered. Several new housing developments and a large population influx in the vicinity have resulted in the construction of a large shopping center. Service-oriented businesses, such as convenience stores, gas stations and fast-food restaurants, presently thrive on the resulting increase in traffic. Also located in the area is Lums Pond, a Delaware State Park, a popular man-made lake and recreational facilities (Wise 1983).

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

The Cazier site was discovered during the Phase I surface reconnaissance of the proposed Route 896 right-of-way (Lothrop et al. 1987:53-80). Geographic limits of historical material was observed in a plowed field over an area of approximately 120' x 120'. Excavation of a Phase II shovel test pit (STP) grid at 20 foot intervals revealed high

FIGURE 5
1906 U.S.G.S. Topographic Map



cultural material densities in the southeast portion of the site. Artifact densities ranged from nine to 34 artifacts per shovel test. Subsequent excavation of 19 (3' x 3') test units encountered an intact house foundation approximately 22' x 16' in dimension and other historical features below the plow zone (Figure 6).

Excavation of four test units (N20E110, N30E110, N30E113, and N15E113) uncovered the northwestern corner and western wall of the foundation, as well as the builders trench (Feature 2; Figure 6). Excavation of the sandy loam fill of Feature 2 in N20 E110 along the west wall of the structure revealed a six course brick foundation capped with mortar extending 1.7' below the plow zone. Auger testing to the south and east revealed that construction of the existing Route 896 roadbed did not impact the foundation.

A total of seven features, including the foundation, were identified during the Phase II investigations. A trash pit (Feature 7) was observed in four contiguous test units around shovel test pit N60E60 (Figure 6). Its horizontal dimensions extended beyond the 6' x 6' area of units and had a maximum depth of 1.5' below the plow zone.

FIGURE 6
Cazier Site Phase I / II Testing

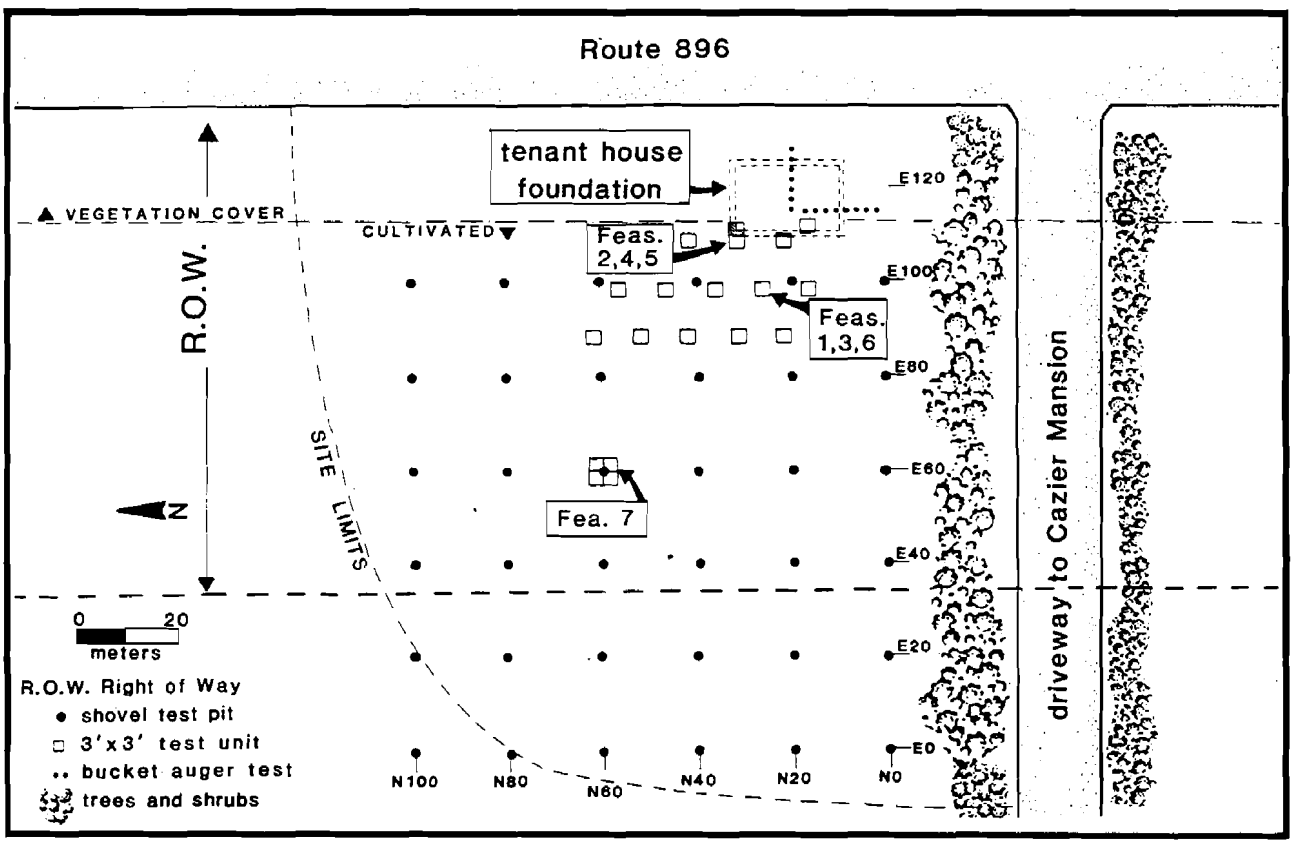


TABLE 1

Kirkwood Farmers and Fruit Growers with Acreage, 1882

NAME	ACREAGE	NAME	ACREAGE
Washington Barron	150 acres	T. H. McCoy	200 acres
Charles Thompson	151 acres	W. M. Stuckert	200 acres
David Ford	175 acres	J. B. Le Fueure, Jr.	260 acres
William H. Dawson	176 acres	Ephraim Sterling	296 acres
A. Benson	200 acres	Lewis G. Ellison	300 acres
Miles Clark	200 acres	E. R. Cann	400 acres
Peter Cleaver	200 acres	J. C. Clark	400 acres
Thomas Davidson	200 acres	R. T. Cann	3000 acres
C. B. Ellison	200 acres	**J. B. Cazier**	**3000 acres**
D. Benjamin Groves	200 acres		
		Total	9908 acres

Historical artifacts recovered from the Phase I and II testing included large amounts of architectural remains, such as window glass, brick, plaster and nail fragments, and a variety of glass and ceramics including whitewares, ironstone, redwares, some pearlware and stoneware (Appendix I). The recovered artifacts were consistent with the archival and documentary data indicating a mid-nineteenth century to early twentieth century occupation.

RESEARCH DESIGN AND RESEARCH DOMAINS, CONTEXT AND CONSIDERATIONS

Based on the Phase I and II investigations, the Cazier site was determined eligible to the National Register of Historic Places under Criterion "D". A data recovery plan was prepared to provide an overall research framework for the Phase III excavations. The main goal of the data recovery investigations of the Cazier site was to collect archaeological data on spatial organization, food preparation, and consumption, and artifact assemblage patterns for use in studying diachronic change on intra- and inter-site levels. Other sites in the Middle Atlantic Region with similar temporal periods of occupation, site function, or inhabitants were consulted for comparison. These sites included the Robert Ferguson House site (Coleman et al. 1983), the Howard-McHenry Tenancy (Hurry and Kavanaugh 1983), the late nineteenth century occupation of the Hawthorne site (Coleman et al. 1984), the Block 1191 investigations in Wilmington (Beidleman, Catts, and Custer 1986), the Temple site (Hoseth et al. 1990), and the Williams site (Catts and Custer 1990). The comparative data generated was to investigate questions about rural cultural change including:

1) Are changes present in refuse disposal processes and techniques? Can changes be observed in the patterns of artifact distributions and are these changes indicative of varied spatial utilization at the sites? Furthermore, can such changes in patterns be related to historically-documented economic and social changes in the surrounding area or to changes in a larger area?

2) Are there changes in the presence/absence, or frequencies, of certain artifact classes among the various historical sites? Can these changes be related to the socio-economic position of the site's occupants or to local and regional economic conditions?

3) Can changes in either of the above categories of data be analyzed for meaningful covariance?

In addition, the research generated from the Phase III investigations at the Cazier site was also incorporated into the broader statewide research program proposed in the Management Plan for Delaware's Historical Archaeological Resources (De Cunzo and Catts 1990). The statewide research program is organized along three parameters: time, space, and research domain. Of the five time periods discussed in the Management Plan, the Cazier site occupation spanned two periods: 1830-1880 Industrialization and Capitalization, and 1880-1940 Urbanization and Suburbanization. The Cazier site is located within the Upper Peninsula geographic region and in a threatened area of Delaware. The research domains applicable to the Cazier site are Domestic Economy and Landscape.

The initial data recovery plan research themes for the Cazier site intersected those proposed within the Delaware state plan's research domains; furthermore, the plan suggested additional themes. The integration of the two allowed for a restatement of the principal research themes and provided additional questions to be addressed by the Phase III investigations. This was accomplished by studying the changing domestic economy and landscape of the Cazier site and its inhabitants.

DOMESTIC ECONOMY

The reconstruction of the household domestic economy is a principal research goal for the historical archaeological investigation of domestic tenant sites in Delaware (De Cunzo and Catts 1990). Background archival research conducted on the Cazier site indicated that it was occupied for approximately 90 years by at least three tenant families (two were known to be black families). The Cazier site dwelling was built in 1844 by Henry Cazier and occupied by black tenants until the house was demolished in 1935. Henry Cazier built the brick house at the entrance to a lane that led from Newark Road (Route 896) to his mansion house "Mount Vernon Place." Local history recounts

that the only "rent" Cazier charged his tenants was to open and close the wooden gate at the lane leading to "Mount Vernon Place." Whether the tenant/tenants acted only as "gatekeepers," or if they farmed portions of Cazier's numerous land holdings is uncertain.

Little is known about the first tenants of the Cazier site. The identity of the tenants is not known until the 1880s when the brick dwelling was inhabited by an African-American, Nicholas M. Stevenson and his family. Mr. Stevenson worked as a horseman for J.B. Cazier until the early 1910s, when he moved to Buck Jersey Road east of Lum's Pond. Rudolf and Ethel Stevenson, relatives of Nicholas Stevenson, then moved into the Cazier gate-house during the late 1920s. Rudolf worked for the government and Ethel worked as a laundress for the Biddle family (renters of the Cazier Mansion and surrounding farmland). Rudolf Stevenson and his wife moved from the gate-house in 1934. During the expansion of Route 896 in 1935, the gate-house was demolished, and the cellar was filled with demolition debris and surrounding soil.

The black occupations of the Cazier site provide an opportunity to study the spatial patterns and material culture processes of nineteenth century black tenant households in Delaware. The social and cultural history of postbellum rural blacks in Delaware is an important topic of study, yet has received comparatively little attention in the historical literature (Catts and Custer 1990; De Cunzo and Catts 1990). Catts and Custer (1990) suggest that a focus on urban and political events as well as a lack of documentary information, has resulted in virtually no studies of Delaware's rural black population. Thus, who the tenants were, how they interacted with Cazier, how they earned their livelihood, and why Cazier felt it necessary to have a "gate-house" and a "gatekeeper" on his estate were basic research questions. Specific research questions included:

1) What were each household's goals and how were they achieved?

2) To what extent did the household participate in local and regional social and economic activities?

3) How did these goals an activities change over time?

As outlined in the Delaware Plan, household goals can include survival and/or may be inspired by religious beliefs and values or other ideologies. Thus, the family/household's production, reproduction, and consumption habits are considered as a strategy to achieve domestic goals (De Cunzo and Catts 1990:17).

LANDSCAPE

Changing farm practices and land utilization patterns can also be studied at the Cazier site. De Cunzo and Catts (1990) urge that data on farm landscapes—the social and environmental patterns of change—be recognized. Changes in farm structure size, site layout, outbuildings, fencelines, and equipment have all been identified as key historical and archaeological variables in the history of rural Delaware (Grettler 1991; De Cunzo and Catts 1990:154-155).

The Delaware Plan suggests that study of the landscape must focus on the evolving settlement patterns by addressing the following specific research questions:

1) How does the shift in the agricultural economy and practices effect settlement patterns?

2) What role does the transformation of the transportation system via the C and D canal and then railroads play in the changing settlement patterns (De Cunzo and Catts 1990:157)?

The landscapes of late nineteenth century rural sites has also been comparatively unstudied. The primary reasons for the lack of research into sites dating after 1880 have been better documentary records and oral histories, and more importantly, the sheer number of late nineteenth and early twentieth century sites. With so many extant sites, many sites occupied from 1880-1940 have been deemed insignificant (De Cunzo and Catts 1990:159).

Recent suburban expansion in Delaware, however, has destroyed many late nineteenth century sites. De Cunzo and Catts (1990) recognize the rapid shrinking data base of late nineteenth century sites and identified two priorities for further research. The first priority was to research data on the increasing ethnic diversity of the population—the northern migration of blacks and the changing relation of blacks and whites in Delaware. The second priority was to research data on the development of automobile transportation and resulting suburbanization (De Cunzo and Catts 1990:161).

The research perspectives employed to interpret the Cazier site included both historical and archaeological research perspectives. Both perspectives are interrelated and data generated from each relied on the other to be most effective. The following research perspectives should be regarded as part of the broader themes of American history that were addressed through the historical and archaeological investigations of the Cazier site. The historical and archaeological research perspectives should be viewed as the framework of topics and issues of a narrower scope that, when combined together, help to define the overall interpretation of larger historical processes.

METHODOLOGY

ARCHIVAL METHODS

The Phase I and II archival research conducted by Lothrop et al. (1987), focused on the property owned by Jacob B. Cazier and his mansion, Mount Vernon Place. The census records for the Jacob B. Cazier household in 1870 and 1900 were examined to identify tenants, but the only non-family individuals included in Cazier's household were his domestic servants living at the mansion. Phase III archival research focused on the tenant dwelling itself and on providing more detailed historical data about the site's occupants and function through time.

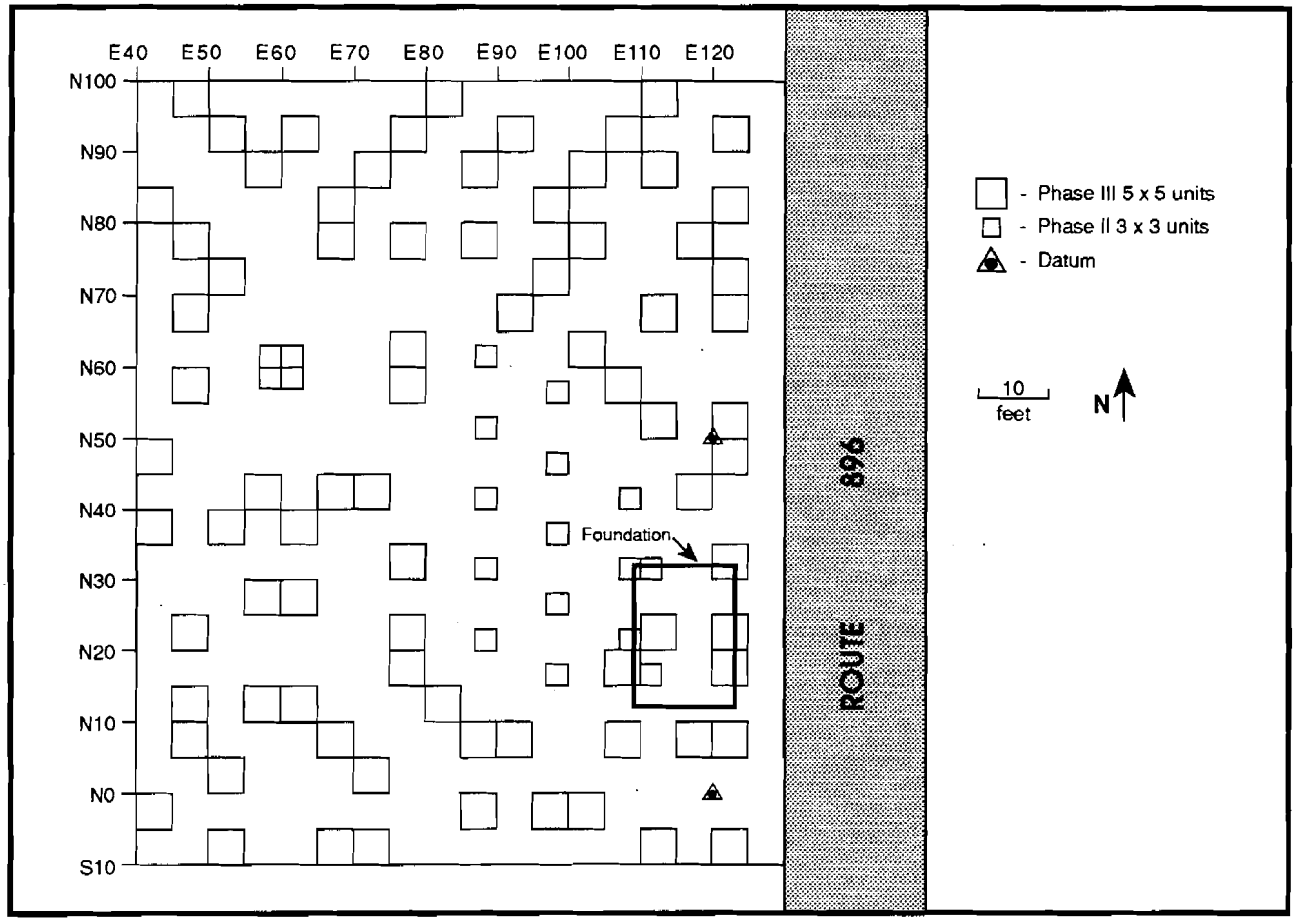
FIELD METHODS

Field investigations at the Cazier site began with the re-establishment of the Phase II site grid. The grid measured 120' north/south and 90' east/west and was further divided into 10' x 10' sub-units. One random 5' x 5' test unit was then excavated from within each of the 10' x 10' sub-units, providing a 25 percent stratified, systematic, unaligned random sample of the plow zone (Figure 7; Plate 2). This sampling technique was implemented based on the results of the Whitten Road sample simulation (Shaffer et al. 1988) demonstrating that a 25 percent excavation of plow zone deposits provided a representative sample of artifacts and a reliable view of their distribution. Larger samples did not provide significantly more reliable data. Nineteen of the 10' x 10' sub-units already contained 3' x 3' test units completed during the Phase II investigation of this site. The artifact totals from the 3' x 3' units were statistically adjusted to conform with the artifact totals from the 5' x 5' units, thus enabling the totals to be used in the artifact analysis.

Plow zone test units were excavated in one soil level down to, but not including, the subsoil. All soils were screened through 1/4 inch wire mesh and all artifacts recovered were bagged according to test unit provenience and grid coordinates. Following the sampling of the plow zone, the remaining plow zone was carefully removed mechanically, and all subsurface features were identified and mapped. Artifacts recovered from the plow zone and subsoil surface during and after mechanical stripping were bagged as unprovenienced surface collections. All subsurface features were then mapped, fully excavated, and recorded. All feature soils were dry screened through 1/4" screen. All artifacts were separated by provenience. Soil samples were collected from selected features, each of the 5' x 5' plow zone test units, and from the southwest corner of each 10' x 10' grid point of the subsoil. Chemical analyses of the soil samples were conducted by the Soils Laboratory of the University of Delaware, College of Agriculture. Features, soil profiles, and plan views were visually recorded using black and white photographs, 35-mm color slides, and videotape.

FIGURE 7

Plow Zone Sample Units



LABORATORY METHODS AND ARTIFACT ANALYSIS

Prior to a detailed artifact analysis, standard artifact processing procedures of the Delaware Bureau of Museums were applied to all artifacts recovered from the data recovery excavations. All artifacts, bone, and shell were cleaned with plain water or, as in the case of deteriorating bone, were damp-brushed. Bone and shell were then placed in labeled bags, while other artifacts were themselves labeled with site numbers and a three-digit provenience number. Historical artifacts were sorted into categories for cataloging based on their material composition; i.e., ceramics, bone, shell, nails, and glass. Prehistoric artifacts were processed and cataloged following the Island Field Museum guidelines. All lithic artifacts were cataloged according to raw material and functional categories including projectile point/knives, early and late stage bifaces, flake tools, debitage, and fire-cracked rocks (FCR). Total artifact counts of both historical and prehistoric artifacts for each unit and feature are provided in Appendix I.

Ceramics recovered from all features, with special attention given to Feature 32 (brick cellar), Features 37, 37A, 65 (trash midden), and Feature 170 (privy), were sorted as to ware type, and vessel reconstruction and cross-mending were carried out to arrive at minimum vessel estimates. Vessels were then coded to a set of standard descriptive terms for analytical purposes.

PLATE 2

Plow Zone Sampling

In the designation of the South number for sherds and vessels, an effort was made to maintain South's original numbering scheme (South 1977), and additional numbers were obtained from Carlson (1983) (Appendix II). Mean ceramic dates (MCDs) were obtained from South (1977) or from the adjusted dates found in Carlson (1983). The time-sensitive attributes and use-related descriptive vessel attributes were entered into a computer data base program. The artifact data generated by the data recovery excavations of the Cazier site were organized into the functional group and classification system developed by South (1977), but no comparative analysis of artifact patterns was attempted (Majewski and O'Brien 1987).

Attributes recorded for each ceramic sherd and/or minimum vessel, if identified, were:

WARE: a combination of paste and glaze characteristics that serve to separate types of ceramics on a basic level.

PLASTIC DECORATION: records decorations involving paste of the ceramic item. Examples include bat-molded plate rim treatments such as shell- and feather-edging and overall ribbed decoration such as that found on some teapots.

COLOR OF DECORATION: refers to the color of painted, or otherwise applied decoration, including slips and glazes.

APPLIED DECORATION: includes all non-plastic decorations having to do with applied color.

VARIETY: records certain types of decoration, for instance a specific named transfer print such as the "Willow" pattern.

SOUTH TYPE NUMBER: Stanley South codified the ceramics described by Noel-Hume in A Guide to the Artifacts of Colonial America (Noel-Hume 1978). Additional ceramic codification and dating were obtained from Brown (1982) and Carlson (1983). These types are useful as chronological markers and are used in generating South's Mean Ceramic Date Formula. The numbered types found in the Cazier ceramic assemblage are contained in Appendix II.

USE/SHAPE/FUNCTION: these codes classify sherds according to the shape of the vessels they belong to and the use to which the vessels are put. Examples are chamber pot and milk pan.

COUNT: sherd counts according to their position on the vessel; rim, base, body, or other, including handles and spouts, and totals.

VESSEL NUMBER: in addition to provenience labeling, reconstructed vessels were assigned unique numbers to identify groups of mended sherds.

DATE RANGE: range of time during which a particular type or variety was manufactured.

MEDIAN DATE: median date of manufacture, from South (1977), and Brown (1982), used to calculate Mean Ceramic Dates for early nineteenth century contexts. Carlson (1983) has refined some of these dates, particularly for later nineteenth century wares, and these refined dates are used in this report.

Attributes that were recorded for each ceramic vessel that was reconstructed were:

A) Number of sherds per vessel
B) Mean Ceramic date on (A) above
C) Vessel Form, i.e.,
    1) flatware or hollowware
       drinking form - cups, or mugs and jugs
D) Vessel Function
    1) dining (tableware)
    2) drinking (tea and coffeeware)
    3) drinking (mugs and goblets)
    4) food preparation
    5) food storage
    6) medicinal (chamber pots, etc,)
    7) decorative
    8) food storage or dining
    9) condiment containers
    10) food preparation or storage
    11) toys

The data set derived from the ceramic vessel analysis of the Cazier site was basic to intra-site and inter-site ceramic assemblage comparisons, which will be explained more fully later in this report.

Glass, excluding window, from all features was sorted as to type, and vessel reconstruction and cross-mending were carried out to arrive at minimum vessel estimates. Vessels were coded to a set of standard descriptive terms for analytical purposes. Date ranges were obtained from vessel type comparisons with known glass vessel manufacturing dates. The time-sensitive attributes and use-related descriptive glass vessel attributes were entered into a computer data base program. The glass vessel data generated by the data recovery excavations of the Cazier site were organized into a functional group and classification system modeled after the ceramic vessel classification system developed by South (1977).

Attributes recorded for each glass sherd and/or minimum vessel, if identified were:

TYPE: refers to the vessel shape and style.

COLOR: refers to the color of the glass, which is dependent on various chemical and metal contaminates or additives mixed with the silica.

MARKINGS/DECORATIONS: refers to embossed figures, lines, numbers, etc., or baked-on enamel labels evident on the vessel body or base.

MOLD SEEMS: refers to small ridges on vessel exterior formed during the manufacturing process, and indicates edges of mold parts. The location and number of mold seams are characteristics of special manufacturing techniques that are easily dated.

SIZE: refers to the dimension measurements of the vessel.

USE/SHAPE/FUNCTION: these codes classify fragments according to the shape of the vessels they belong to and the use to which the vessels are put.

COUNT: fragment counts according to their position on the vessel; rim, base, body, or other, including handles and spouts, and totals.

VESSEL NUMBER: in addition to provenience labeling reconstructed vessels were assigned unique numbers to identify groups of mended fragments.

DATE RANGE: range of time during which a particular vessel style, closure, or variety was manufactured.

Attributes that were recorded for each glass vessel that was reconstructed were:

A) number of fragments per vessel
B) Vessel Function
    1) Alcoholic Beverage
    2) Non-alcoholic Beverage
    3) Medicinal
    4) Condiments
    5) Chemical
    6) Drinking
        a) Tumbler
        b) Stemmed
        c) Mug/Other
    7) Other Table
        a) Dining
        b) Serving
    8) Decorative
    9) Lighting
    10) Personal
    11) Mirror
    12) Preserves/Storage

The data generated from the glass vessel analysis of the Cazier site was basic to intra-site and inter-site glass assemblage comparisons and will be explained more fully later in the report.

Since a variety of construction mortars dating from the nineteenth through the twentieth centuries were recovered from the Cazier site, mortar and plaster fragments excavated from several features, with focus on Feature

32 (Cellar), were subjected to mortar analysis testing developed by Alan Tabachnick of Cultural Heritage Research Services Incorporated (1988:1-7). Lime-sand mortars dominated construction until 1880, after which cement mortars were most common (McKee 1980:62-69). The ratio of lime, clay, and sand was used to determine the mortar formula used in construction of a foundation. Differences in mortar formulas were used with some success to provide relative sequences of structure construction, as was used by Cultural Heritage Resource Services (CHRS) Inc. at the Allen site in Christiana (Basalik et al. 1988:105-108). No absolute dates from the mortar formulas, however, could be determined.

The following attributes were recorded for each mortar sample:

WEIGHT OF SAMPLE: refers to the weight of the mortar sample after being ground to a coarse powder.

RESIDUE: refers to the amount of residue separated from the sand during the testing process. The residue is inspected for amounts of clay, cement and lime.

SAND: commonly used as a filler or grit in mortar.

CLAY MORTAR: consists mainly of mud and clay, strengthened by straw and horse or hog hair, also called "wattle or daub". This is used in regions where lime was difficult to obtain.

LIME-SAND MORTAR: most common type of mortar used in structures until the late nineteenth century. It is a mix of lime, sand and water, in a variety of proportions.

PORTLAND CEMENT: manufactured in the U.S. after 1871, known for its strength, low absorbency and hardness. It became a major ingredient in mortar after 1880. Common proportions were one part cement to 6-10 parts sand to 1/2 to 2 parts lime paste.

PLASTER: used to cover exterior and interior walls and ceilings. Clay plaster was used for chinking frame and log houses, composed mainly of clay, hay, lime, and hair. Lime plaster was a mixture of lime, sand, hair, and/or other binding materials. The data generated from the analysis of mortar fragments from the Cazier site were used in the intra-site interpretations and is explained more fully later in this report.

SITE HISTORY

The Cazier site was located on one of several properties owned by Jacob B. Cazier (Figure 2). The Cazier family lived and owned property in this area of Delaware for several generations. Mathias Van Bibber, great-great-grandfather of Jacob B. Cazier, purchased portions of the St. Augustine Manor Tract from Augustine Herrman in 1714. This included "all the lands east of Bohemia Manor to the Delaware, and south of the Chesapeake and Delaware Canal to Appoquinimink Creek" (Scharf 1888:949). Matthias Van Bibber bequeathed to his daughter, Rebecca Van Bibber Cazier, the portion of the St. Augustine Manor Tract situated in Delaware (Scharf 1888:949). According to Scharff (1888), the portion of land that contained the Cazier site was passed through generations of the Cazier family from the third quarter of the seventeenth century until the first half of the twentieth century (Table 2). Edna Cazier Townsend, daughter of Jacob B. Cazier, sold the mansion and 571.5 acres of land to the V and W Hotel Corporation in 1942 (Table 2).

Henry Cazier, grandson of Rebecca Van Bibber Cazier, and his wife, Sarah, resided at White Hall farm, one of the properties inherited from his grandmother. Jacob Benson Cazier was born at this farm on December 25, 1833. Jacob's father, Henry, was a wealthy gentleman farmer who received additional income from his many tenant farms in Pencader Hundred, Delaware and Cecil County, Maryland. Henry Cazier was an old line Whig and strong supporter of Henry Clay.

The farm that contained the Cazier site (7NC-F-64) consisted of two sets of buildings; a tenant house and associated outbuildings located south of Mount Vernon Place and another brick dwelling and outbuildings built in 1802 nearer to the road leading from The Buck to Glasgow (Cooch 1936; Figure 2). The second dwelling and outbuildings

TABLE 2

Cazier Site Chain of Title

TRANSACTION	DATE	ACRES	REFERENCES
Lord Baltimore to Augustine Herman	1671	--	Scharf 1888:949
Ephraim Augustine Herman to Mathias Van Bibber	1714	--	Scharf 1888:949
M. Van Bibber to Rebecca Van Bibber Cazier	--	--	Scharf 1888:949
Rebecca Van Bibber Cazier to John, Jacob, Mathias Cazier	--	--	Scharf 1888:949
John Cazier to Jacob and Mathias Cazier	March 21, 1780	--	Scharf 1888:949
Jacob Cazier to Henry Cazier	--	--	--
Henry Cazier to Jacob B. Cazier	Aug. 22, 1859	--	WRX-1-293
Jacob B. Cazier to Hannah Cazier	1918	--	WRL-4-143
Hannah Cazier to Edna Cazier Townsend	1921	--	WRP-4-445
Edna Cazier Townsend to V & W Hotel Corp.	Nov. 14, 1942	571.5	DR N-43-259
V & W Hotel Corp. to Thomas B. Kimamon	May 19, 1945	571.5	A-45-231
Thomas Kimamon to Thomas Deshong	July 3, 1946	571.5	F-46-317
Thomas Deshong to Richard and Alberta Boys	May 1, 1947	571.5	W-46-317
Richard Boys to The Cazier Farms, Inc.	Aug. 23, 1962	571.5	4-70-39
The Cazier Farms, Inc. to Richard Boys, Jr. et al.	Jan. 3, 1966	571.5	K-78-383
Richard Boys, Jr. et al. to James Brennan	March 1, 1967	--	O-78-438

TABLE 3

Summary of Cazier Family Properties, 1856-1881

PROPERTY OF HENRY CAZIER IN 1856

PROPERTY	ACRES	IMPROVEMENTS	VALUE
1	200	Brick dwelling and barn	$12,000
2	90	Brick dwelling	$3,150
3	275	Frame dwelling and barn	$10,000
4	170	Brick dwelling and barn	$6,800
5	40	Unimproved	$800
6	120	Frame dwelling and frame barn	$3,600
7	19	Woodland	$570
8	286	Woodland and swamp	$5,720

PROPERTY OF JACOB CAZIER IN 1877-1881

PROPERTY	ACRES	IMPROVEMENTS	VALUE
1	750	Three houses, brick house and frame barn	$46,000
2	250	Unimproved	$6,000
3	225	Brick house and frame barn	$12,000

Source: Pencader Hundred Tax Assessments, 1856-1881, Delaware State Archives (microfilm)

was the original Mount Vernon Place farm. Francis A. Cooch described the farm:

> To this building located about one-third of a mile back from the road, in 1844, Henry Cazier added considerably, planted the long avenue with a double row of trees and English fashion, built a small brick cottage by the roadside which he rented upon the condition that when he drove down the lane the tenant should come out and open the gate. To Mount Vernon Place he then removed and established himself for the balance of his life.

This comment suggests that the Cazier site, located at the junction of the Mount Vernon Place lane and Route 896, was the "gatekeeper's" brick cottage built in 1844. A story reported by Cooch indicated that the unnamed tenant of the cottage indeed acted as a gatekeeper.

> ...When Henry Cazier drove down the lane for the first time after the lease had been executed, out stepped the tenant, pushed back the gate and propped it open with a stick, saying, "now my rent's paid for the year,"...(Cooch 1936:104).

Around the time of his father's encounter with the gatekeeper, Jacob attended school at Newark Academy and Delaware College. He also made a tour of the United States, stopping at many important cities (Scharf 1888:949). His father, Henry, died in 1859 at the age of sixty and was buried in the family lot of the Pencader Presbyterian Church of which he was a faithful supporter (Cooch 1936:104).

During his lifetime, Henry Cazier amassed considerable wealth and property. Four years prior to his death, he owned eight substantial properties (Table 3). After his father's death, Jacob Cazier received more than 1,000 acres of farmland in Cecil County, Maryland, and Pencader Hundred (WR X-1-293), and over $15,000 from his father's personal estate (Estate Settlement, Henry Cazier, 12-3-1860). At the age of 26, Jacob retired "from the practical work of farming" and resided at his mansion "Mount Vernon Place" (Scharf 1888:949).

Jacob remodeled Mount Vernon Place mansion and landscaped the grounds in 1878. He removed the fountain enclosed by a high picketed iron fence from the front lawn, but left the trees and boxwoods. The two story, mansard roof, double front mansion with broad front porch was surmounted by a low iron fence (Cooch 1936:105; Plate 3). Twentieth-century renters of the mansion and farmland, Richard M. Biddle, reported the presence of at least eight outbuildings, including an ice house, a milk house, a pump house, a wagon shed, a granary, a barn, a shutter, and a smoke house. The mansion, as well as the outbuildings, were depicted in a lithograph provided by Scharf (1888; Plate 4). Mr. Biddle mentioned that the lane was wider at the entrance, and narrowed at approximately 100' west of the junction of the lane and Route 896. At this narrow location was the site of large wooden gate posts and a wooden gate. A wrought iron fence encircled the mansion with wooden gates in the front and back yard. The gates were engraved with his name, J.B. Cazier, and the date, 1886 (Biddle, personal communication 1990). A summer kitchen was located south of the mansion, which Mr. Biddle seemed to think predated the mansion. This structure was probably the original brick dwelling built on the farm in 1802 (Cooch 1936).

In 1877-1881, Jacob Cazier owned three properties (Table 3). The largest of the properties was a 750 acre parcel improved with three houses, a brick house, and a frame barn. The Cazier site probably contained the remains of one of the three houses. None of the maps from this time period, however, show a dwelling at the location of the Cazier site along Route 896 (Rea and Price 1849; Beers' 1868; and Baist's 1893; Figures 2, 3, and 4). The only map showing the dwelling was the 1906 U.S.G.S. Wilmington Quadrangle Topographic Map (Figure 5).

Jacob Cazier's success in farming may not have continued in his later years. Between 1907 and 1918, he sold off a number of farms and tracts of land acquired in the late 1800s (Lothrop et al. 1987:63). At Jacob's death in 1918, his total real estate holdings, including the Mount Vernon Place Farm, diminished from 3,000 acres to 1,030 acres (Probate File, 21 May 1920). Mount Vernon Place itself was bequeathed to his wife Hannah (WR L-4-143; Table 2). Edna Cazier Townsend obtained the property following her mothers death in 1921 (WR P-4-445).

Little is known about the occupants of the gatekeeper's cottage by the lane. Cooch (1936:104) noted the cottage was built specifically for the use of a tenant gatekeeper, although he did not identify the gatekeeper. United

PLATE 3

Jacob B. Cazier and "Mount Vernon Place" Circa 1900's

States Census records for Henry Cazier during 1840 through 1860 provided no other clues to the identity of the first gatekeeper. Tax assessments, personal inventories, as well as the will of Henry Cazier were also examined, but no information pertaining to the gate-house or its tenants was found. Mr. Ronald Ogden provided an oral account of Jacob Cazier's carriage-driver, a black man named Stevenson, who lived in the gate-house (Lothrop et al. 1987). As a result of an article written for the **News-Journal** concerning the excavations at the Cazier site, Mr. Stevenson's daughter, Elizabeth Stevenson Stafford, contacted UDCAR and provided the much needed information about the tenants of the gate-house. She related that her father's full name was Nicholas M. Stevenson. He was born in Hampton, Virginia and married her mother, Mary E. Smith. Stevenson, his wife, and four of their children lived in the small cottage by the lane around the turn of the century (1900). With a full name and date, the tax and census records were reexamined and the census of 1900 provided information about the Stevenson family — occupation, ages, and children (Table 4).

The occupation of the Cazier site by black tenants raises fundamental questions concerning the role of blacks in Delaware's rural economy, their social and cultural lives, and the general lack of historical research of this group of people. Information concerning the quality of life of Delaware's postbellum African-Americans is abstracted from a previous Delaware Department of Transportation report (Catts and Custer 1990:65-69).

After the Civil War, blacks in Delaware could not be bought or sold, they could own property, they could move about with comparative freedom, they could belong to their own churches, and they had the right to vote. School facilities for most rural black communities were provided in the 1870s. Around the time when Nicholas Stevenson was employed by Jacob Cazier, 33 percent of the black population were employed as agricultural laborers, over 34

PLATE 4

Mount Vernon Place (N-141) Circa 1888

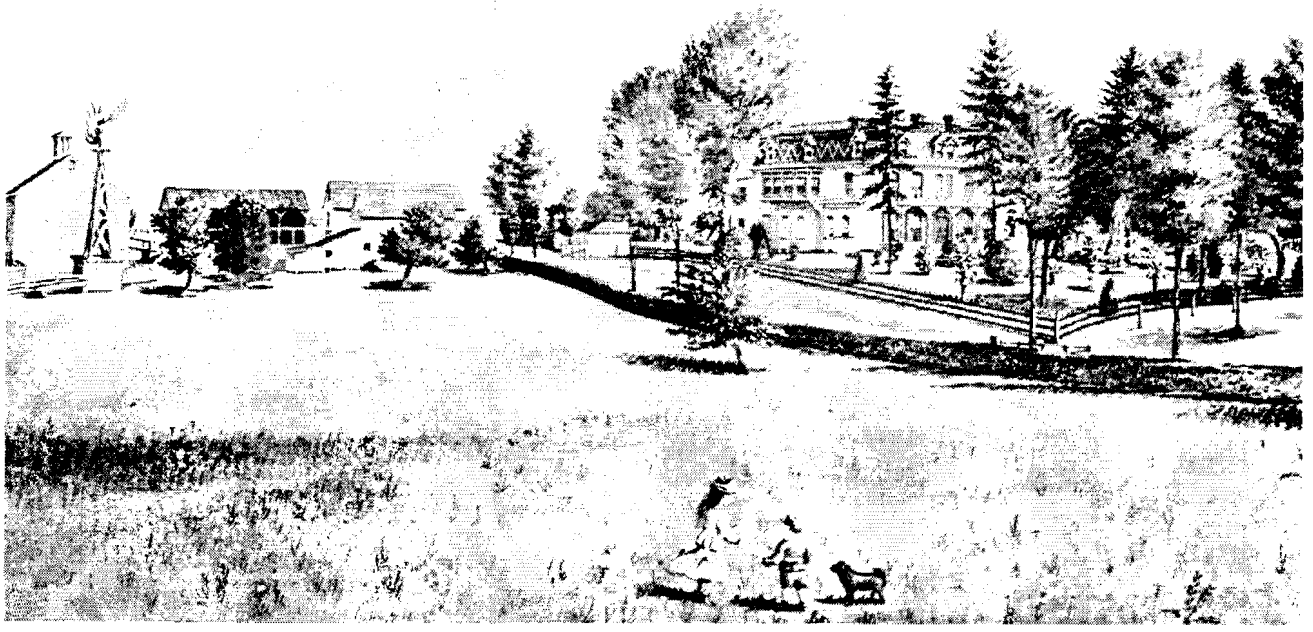


TABLE 4

Nicholas Stevenson Family in 1900

NAME	RACE	AGE	(SEX)	BIRTH DATE	OCCUPATION	PROPERTY
Nicholas Stevenson	Black	34	(M)	1866	Day laborer	Renter
Mary E. Stevenson	Black	23	(F)	1877	---	---
Bertha Stevenson	Black	1	(F)	1898	---	---

Source: 1900 U. S. Census, Pencader Hundred, Delaware State Archives (microfilm)

percent in non-agricultural work, and 30 percent as servants and domestics. In 1860, only eight percent of the blacks recorded were listed as farmers (Livesay 1968:87-123; Munroe 1957:436-440; Hancock 1968:63-64).

In several rural hundreds of New Castle County, African-Americans accounted for a sizable proportion of the total population. In 1860, St. Georges Hundred had the largest black population at over 36 percent, and Pencader Hundred was 35.6 percent black (Table 5). The 1870 census population figures (Table 5) were consistent with the prewar levels of 1860, and suggest the degree to which Delaware's agricultural economy depended on black labor (U.S. Bureau of Census 1968; Bausman 1933).

One important cohesive factor within the black community of Delaware and the surrounding region was the social and religious annual event called the Big Quarterly. The Big Quarterly was a meeting held in Wilmington on the grounds of the Mother A.U.M.P. Church. The church was the center of social life for most African-Americans in Delaware, and the Mother Church came to symbolize a degree of freedom, for both slave and free, from white dominance of the black community (Baldwin 1981:197-211).

The St. Thomas A.U.M.P. Church, located in Pencader Hundred west of Glasgow, also held an annual event called the Big Quarterly. On a smaller scale than the Mother Church, the Glasgow festival drew blacks from the surrounding region, including Newark, Summit, Elkton, and Cedar Hill. The Stevenson family attended the Summit Bridge Big Quarterly, as well as the Mother A.U.M.P. Big Quarterly.

The Big Quarterlies conveyed a sense of community and society to Delaware's African-Americans. In particular, the Glasgow Big Quarterly suggested that the village of Glasgow was the center of a well-developed black community in the nineteenth-century, and that the area around the village may have been conducive to black residence. Supporting this inference was the U.S. Census for 1860 and 1870, indicating that Pencader Hundred's population was over 30 percent black (Table 5). Thus, the arrival of Nicholas Stevenson from Virginia in the 1890s to Pencader Hundred was probably the result of good employment possibilities and the presence of a thriving black community.

Elizabeth Stevenson Stafford and other informants, Richard and Anne Biddle, have painted a more complete picture of the Cazier site in the first quarter of the twentieth century. Although Elizabeth Stevenson did not live in the cottage (the Stevensons moved to Buck Jersey Road, or Little Jersey, near Lum's Pond in the early 1900s) she walked past her old family home, and crossed the Chesapeake and Delaware Canal everyday on her way to school. Four of her seven siblings were born in the small cottage and it was the stories about the house told by her sisters, Bertha, Edna, and Emily, that Elizabeth remembered most. Her father, Nicholas worked as a "horseman" for Jacob Cazier and drove Cazier's two-horse family carriage. Elizabeth's father sometimes took her sisters and their dog Spot up the lane to play at the mansion. Elizabeth mentioned that her three older sisters played with porcelain dishes and that sometimes on her way home from school, she would stop at the cottage and look for these dishes, as she and her younger sisters, Etzell and Esther, had only tin dishes. The older sisters tended a watermelon patch located behind the privy (Feature 170 at the Cazier site) and her father kept a garden there as well.

Richard and Anne Biddle also remembered Cazier's gate-house. Richard Biddle's parents rented the mansion and the farmland from Edna Cazier Townsend from 1925 until 1945. Shortly after the Biddle's moved into the mansion, Rudolf and Ethel Stevenson (nephew of Nicholas) moved into the gate-house. Rudolf worked for the government (relating to the widening of the Chesapeake and Delaware Canal) and Ethel worked as the laundress for the Biddle family. The Rudolf Stevensons had no children and moved from the tenant dwelling in 1934. The sequence of tenant, land ownership and time frame is listed in Table 6.

Richard Biddle described in detail the tenant dwelling and yard. The small two-story brick house had a wood shingle roof and faced the Mount Vernon Place lane (Figure 8), with a wooden porch on the south (lane) side. The porch was about four or five feet above ground surface, supported by three wooden posts. Located on the south side of the porch was a set of five steps that led to the wooden door of the house, which was not centered, but closer to Route 896 (Figures 8 and 9). A large glass window was located to the left side of the door, but no other windows were present on the main floor. The first and second stories had wide plank floors.

TABLE 5
Black Population of Delaware

1860	HUNDRED	TOTAL POPULATION	BLACK POPULATION	% OF BLACK POPULATION
	St. Georges	4,546	1,654	36.4%
	Pencader	2,505	892	35.6%
	Appoquinimink	4,072	1,120	27.5%
	Red Lion	2,643	502	19.0%
	New Castle	3,468	629	18.1%
	White Clay Creek	2,763	461	16.7%
	Wilmington (city)	21,258	2,214	10.4%
	Christiana	5,613	435	7.7%
	Mill Creek	3,654	272	7.4%
	Brandywine	4,185	173	4.1%
1870	HUNDRED	TOTAL POPULATION	BLACK POPULATION	% OF BLACK POPULATION
	St. Georges	5,075	2,000	39.4%
	Pencader	2,542	890	35.0%
	Appoquinimink	4,299	1,289	30.0%
	New Castle	3,682	2,906	21.0%
	Red Lion	2,604	529	20.3%
	White Clay Creek	2,620	515	19.6%
	Mill Creek	3,302	358	10.8%
	Wilmington (city)	30,841	3,211	10.4%
	Christiana	5,370	538	10.0%
	Brandywine	3,180	86	2.7%
	TOWN			
	Christiana	443	134	30.2% (WCC)
	Odessa	695	176	25.3% (St.G)
	Port Penn	320	76	23.7% (St.G)
	New Castle	1,916	312	16.3% (NC)
	Newark	915	145	15.8% (WCC)
	Middletown	915	127	13.9% (St.G)
	St. Georges	376	34	9.0% (RL / St.G)

WCC - White Clay Creek Hundred
St.G - St. Georges Hundred
NC - New Castle Hundred
RL - Red Lion Hundred

Source: Catts and Custer 1990: 66-67

The main floor consisted of one room with a wood-burning cookstove located in the center of the east wall (Figure 8). A pipe led from the stove to the chimney located on the outside of the east wall of the house. The stairway to the second story was located along the east wall south of the stove. Eight to ten steps led to the second story, which also had only one room, but was divided by a six foot partition (Figure 8). Two windows with four panes each, one in each room, did not open and were located in the brick wall of the east side of the house. The entrance to the cellar from outside, below the porch. The floor of the cellar was brick and a brick chimney support was located along the east wall.

TABLE 6

Owners and Tenants of the Cazier Site

DATE	OWNER	TENANT
House Built 1844-1859	Henry Cazier	Unknown
1859-1890's	Jacob Cazier	Unknown
1890's-1910	Jacob Cazier	Nicholas Stevenson
1910-1918	Jacob Cazier	Unknown
1918-1921	Edna Cazier Townsend	Unknown
1921-1934	Edna Cazier Townsend	Rudolph Stevenson
House Demolished 1935		

A well was located on the east side of the house. A one-hole wooden privy was located approximately 10 feet west of the house and a wood pile (not stacked, but spread out) was located south of the outhouse (Figure 9). A wire fence surrounded the small yard area and no other buildings were present. A small strip of land located between the wire fence and the lane was used for a garden, but the garden didn't receive much sun due to the shade of the trees along the lane. The Biddle's plowed the field surrounding the house, leaving approximately 10 to 15 feet of yard area beyond the house and outhouse. Mr. Biddle had to plow around a walnut tree that was located approximately 50 feet northwest of the house and recalled that the soil in that area was very dark, almost black (Figure 9). The Delaware Department of Transportation purchased the Cazier tenant house in 1935 and then demolished the house for the expansion of Route 896. The Biddle's recounted that the highway department "hated to take the little house, but it would be dangerously close to the new highway."

EXCAVATION RESULTS

INTRODUCTION

Phase III excavations at the Cazier site were conducted in three stages: 1) the plow zone sampling, using randomly excavated test units; 2) mechanical stripping of the remainder of the plow zone from the site area, and; 3) the identification and excavation of subsurface features at the site. A total of 208 cultural and non-cultural features were identified at the Cazier site. Included in this number were the dwelling cellar (Feature 32, Structure I), western addition, and porch, an outbuilding or shed (Outbuilding I), a nineteenth century privy (Feature 170), a twentieth century privy (Features 36 and 173), a trash midden, and several major fencelines (Figure 10). The results of the data recovery excavations at the Cazier site will be discussed below.

PLOW ZONE SAMPLING AND MECHANICAL STRIPPING

The examination of diachronic patterns of spatial utilization and discard at the Cazier site was one of the major components of the data recovery program. The overlying plow zone contained the bulk of the archaeological assemblage and represented a separate, complementary source of spatial data equally as important as the underlying discrete features. Data recovery excavations at the Cazier site began with the reestablishment of the 90' x 120' Phase II grid over the area of highest artifact density and the stone foundation. Utilizing the same Datum (NOE120) and grid system established by Lothrop et al. (1987) for Phase II testing, 5' x 5' test units were then randomly selected from each 10' x 10' grid square and were excavated to the base of the plow zone. This sampling scheme consisted of a 25 percent stratified, systematic, unaligned sample (Plog 1976:136-144).

FIGURE 8

Reconstruction and Exploded View of the Cazier Tenant House, circa 1930

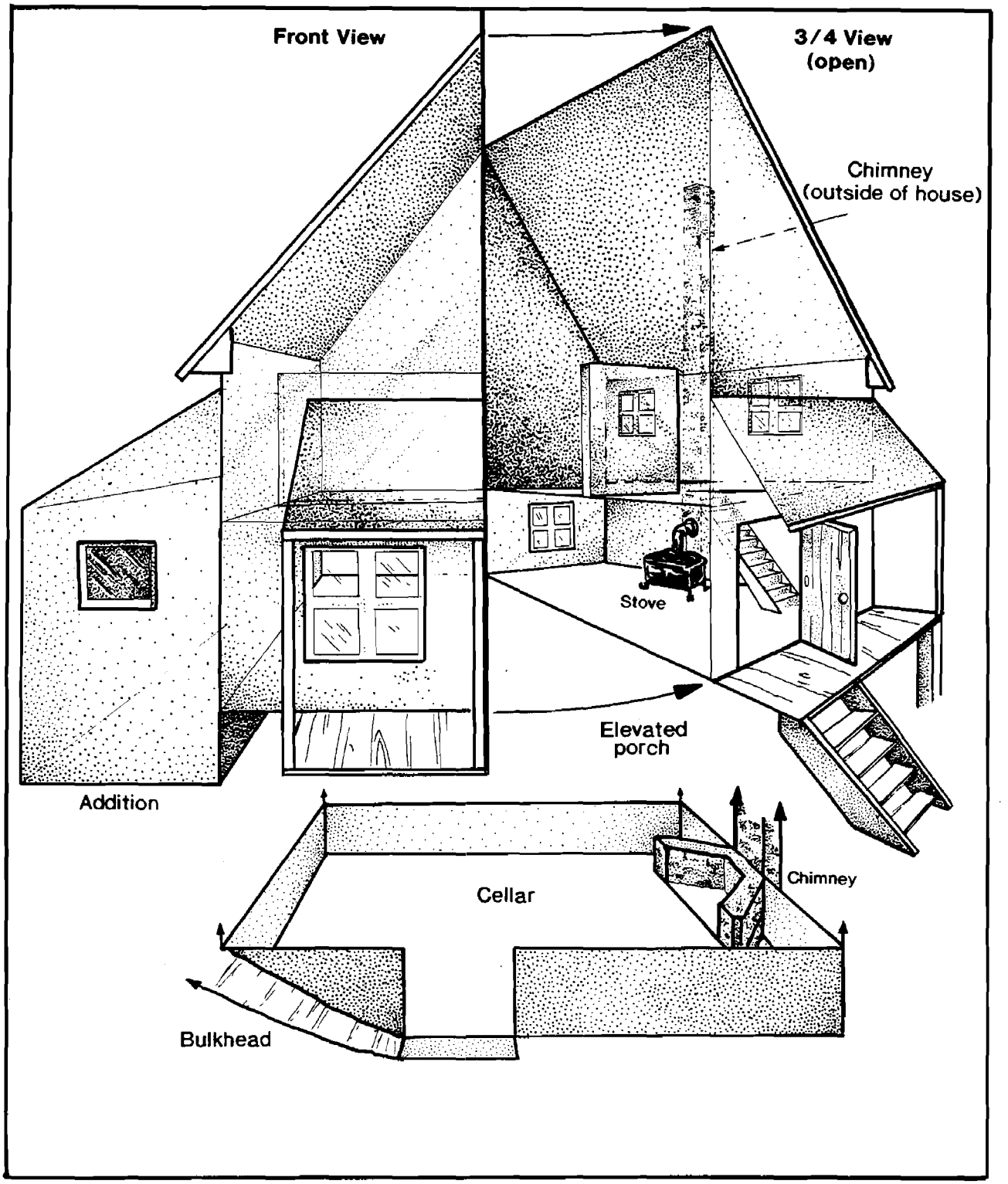


FIGURE 9

Cazier Site Layout, Circa 1925

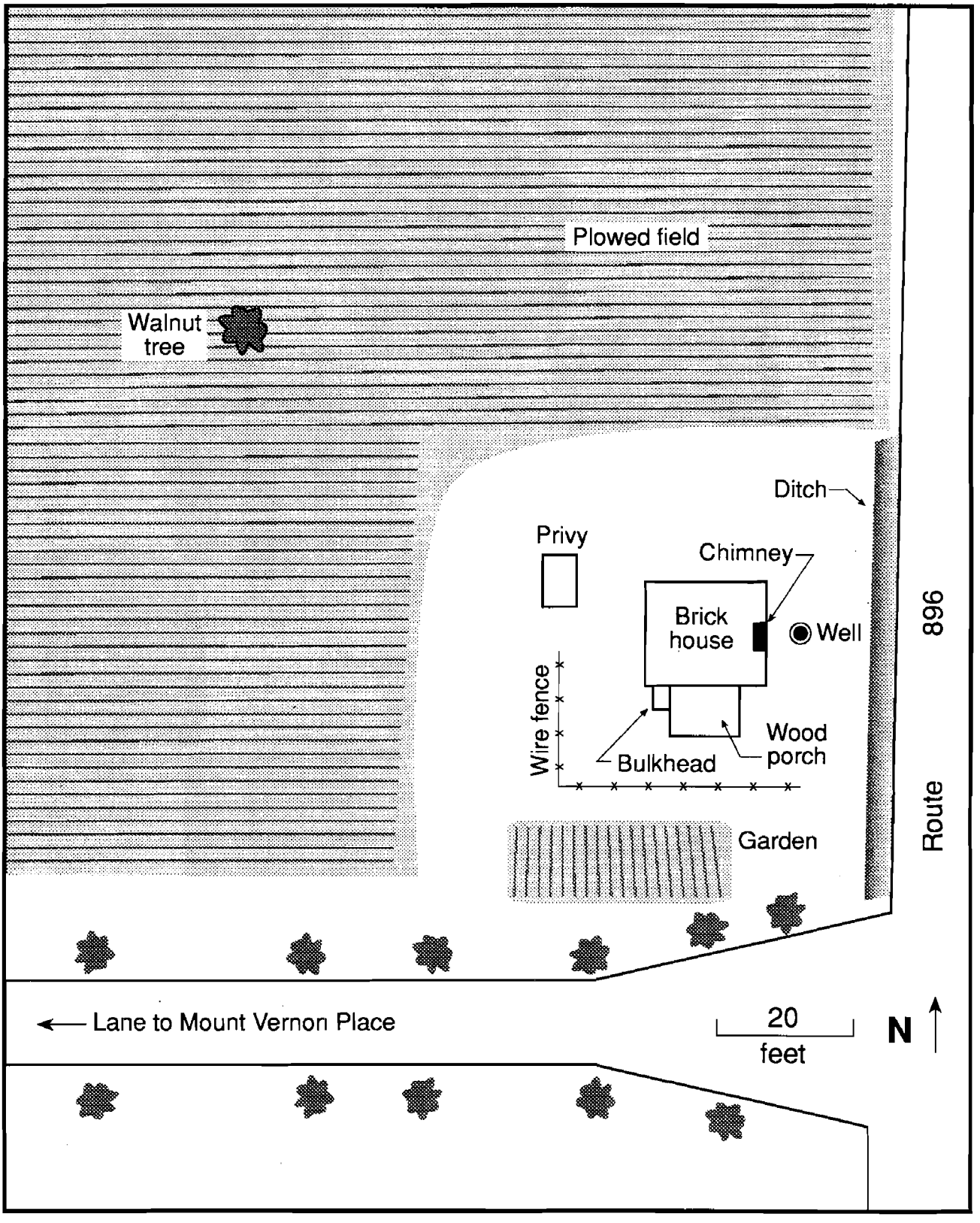


FIGURE 10
Plan View of Features

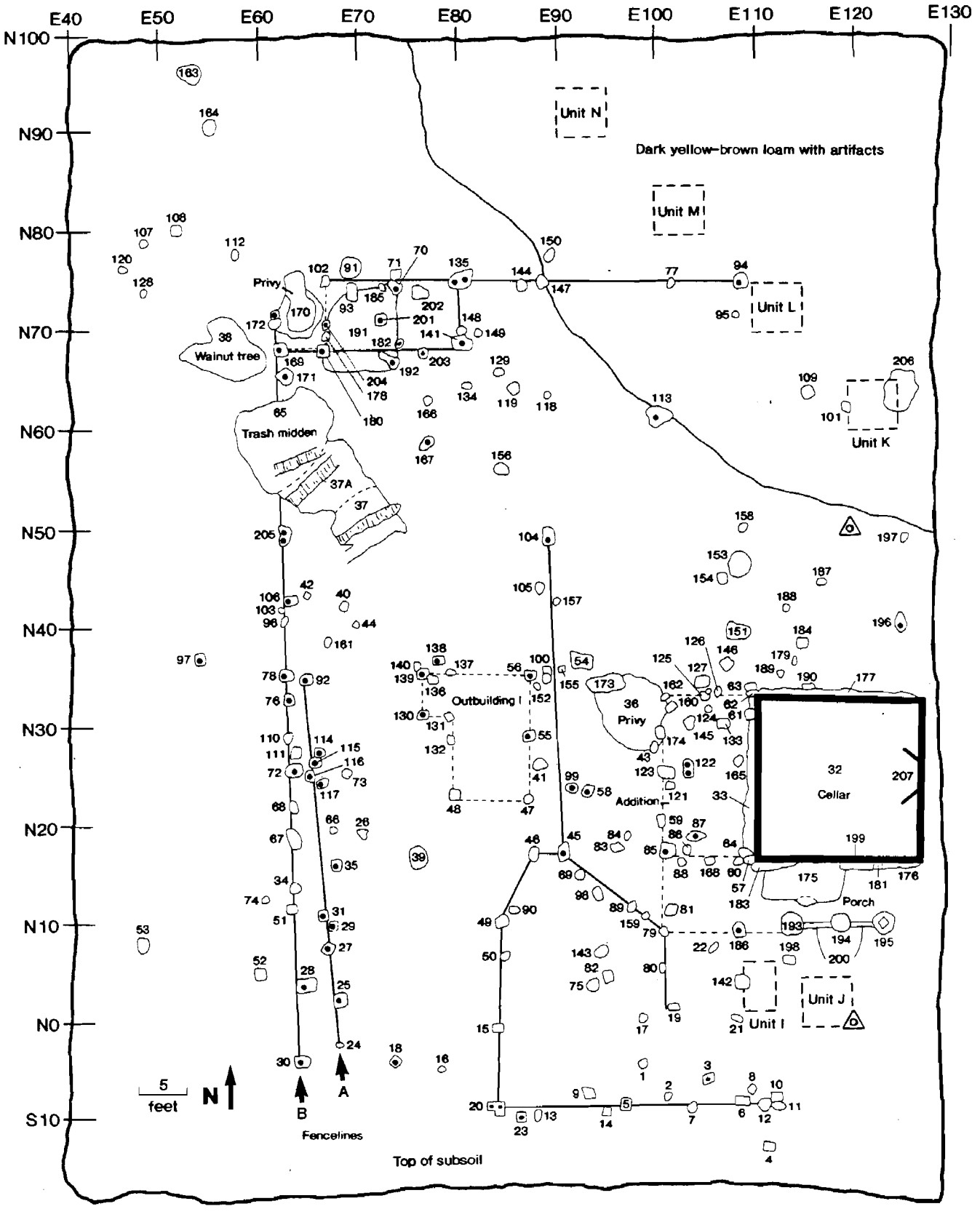
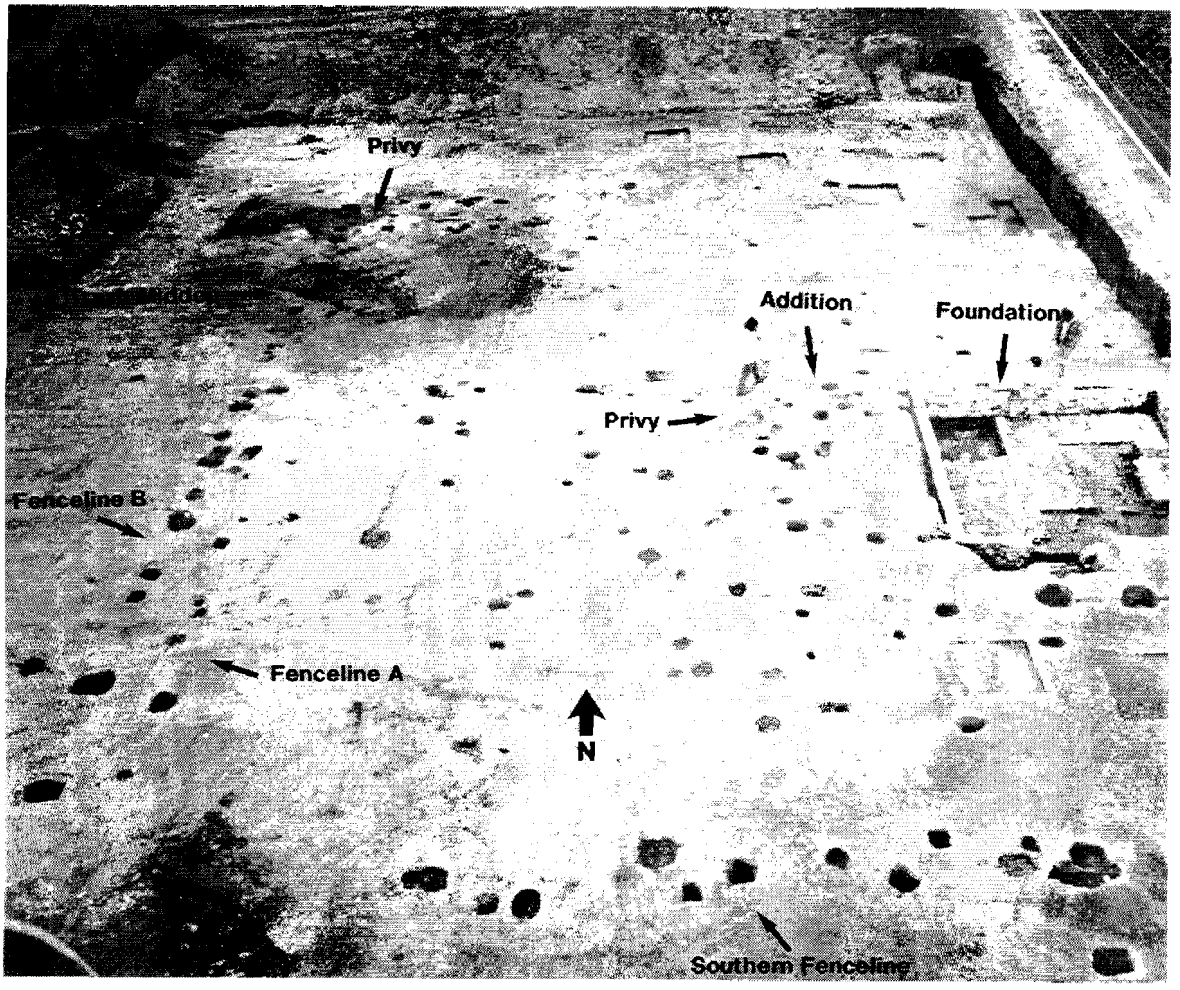


PLATE 5

Aerial View of Excavated Features



Eighty (5' x 5') test units (2,000 square feet) were excavated as part of the plow zone sampling (Figure 7; Plate 2). The artifacts excavated from the nineteen (3' x 3') units during the Phase II investigations were incorporated into the Phase III plow zone sample data, providing a complete plow zone sample used for artifact distribution analysis.

The plow zone consisted of a medium brown silty loam and the subsoil varied from yellow brown sandy clay to an orange-brown sandy clay. Plow zone depth ranged from 0.6' in the southern and western portion of the site to 1.1' in the northeast portion of the site following a gentle slope towards the northeast. The plow zone around the foundation (Feature 32) was hand shoveled so it would not be impacted by mechanical stripping of the plow zone.

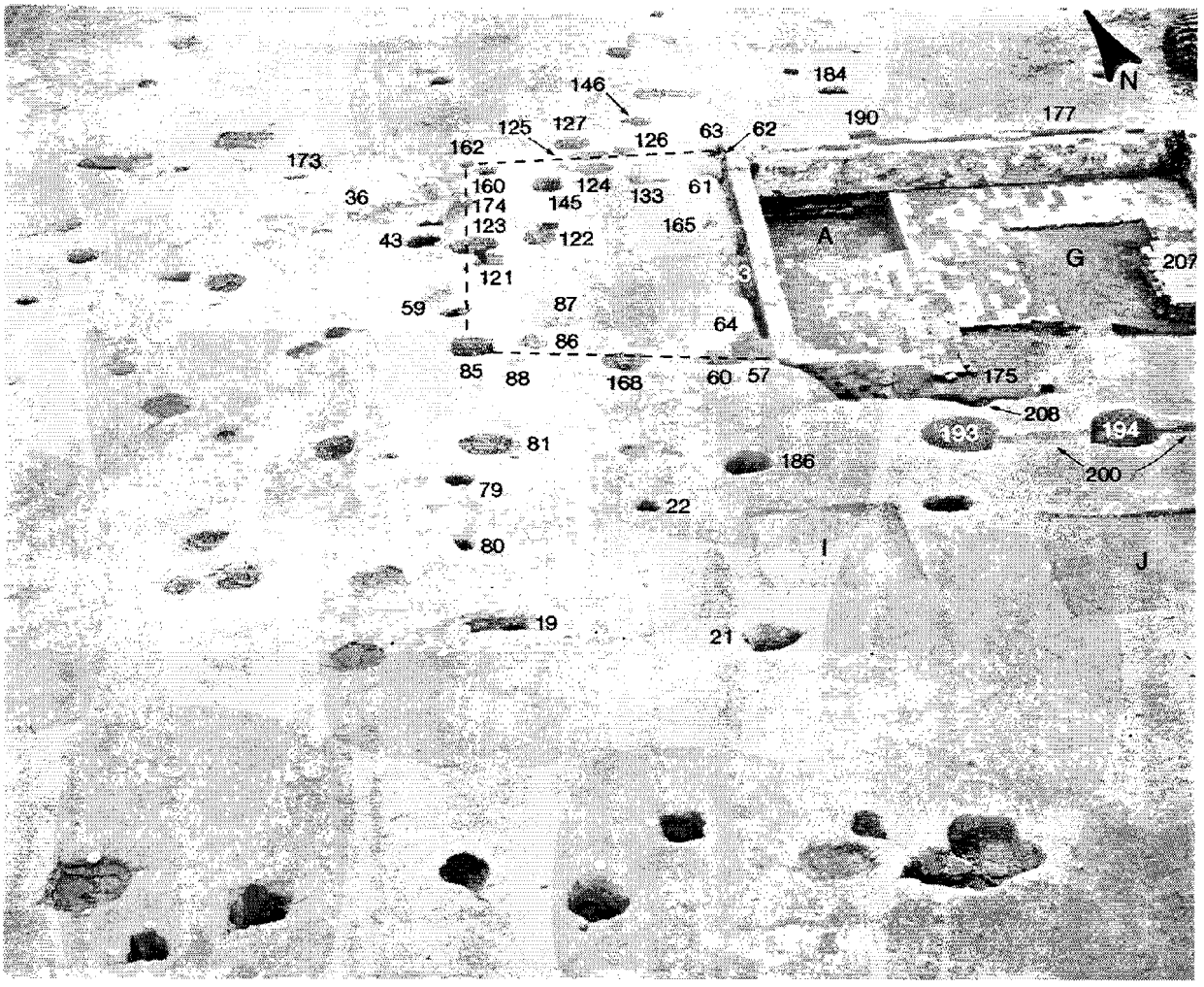
Following the excavation of the plow zone test units, a Delaware Department of Transportation grade-all was employed to carefully remove the remaining plow zone from the site. The grade-all procedure was monitored by UDCAR archaeologists, and all features were identified, marked, and mapped.

FEATURE EXCAVATION

Two hundred and eight features were identified and excavated during the data recovery excavations at the Cazier site (Figure 10; Plate 5). Examination of the cellar and adjacent features identified a western addition and a

PLATE 6

Aerial View of Feature 32 (Cellar), Western Addition Support Posts and Porch Support Posts



porch on the south side of the dwelling. One outbuilding (Outbuilding I) comprised of several distinct post hole features was apparent midway between the dwelling and the western fenceline. A north-south fenceline was observed separating the area between the addition and Outbuilding I. Two other fencelines were located, one to the north and one to the south. Other identified features included two privies (Features 170, 36 and 173), another possible outbuilding next to Feature 170 (Privy), five small trash pits and several miscellaneous post holes. In addition, a large (10'x 8') trash midden was identified south of the privy. Several non-cultural features, tree roots and rodent holes, were also located. Each of the major elements of the site will be discussed in detail below.

Structure I

The archaeological evidence of Structure I consisted of 41 Features: Feature 32 (a brick foundation and cellar); Feature 207 (chimney base); Features 33, 176, 177, and 183 (builder's trenches); Features 181 and 190 (posts associated with builder's trenches); Feature 175 (bulkhead entrance); Feature 208 (entrance support post); Features 193, 194, 195 and 200 (porch support posts); Feature 199 (threshold); and Features 43, 57, 59, 60, 61, 62, 63, 64, 85, 86, 87, 88, 121, 122, 123, 124, 125, 126, 133, 145, 160, 162, 165, 168 and 174, (structural posts for the western addition) (Figure 11; Plate 6).

FIGURE 11
Detail of Cellar, Western Addition, and Porch

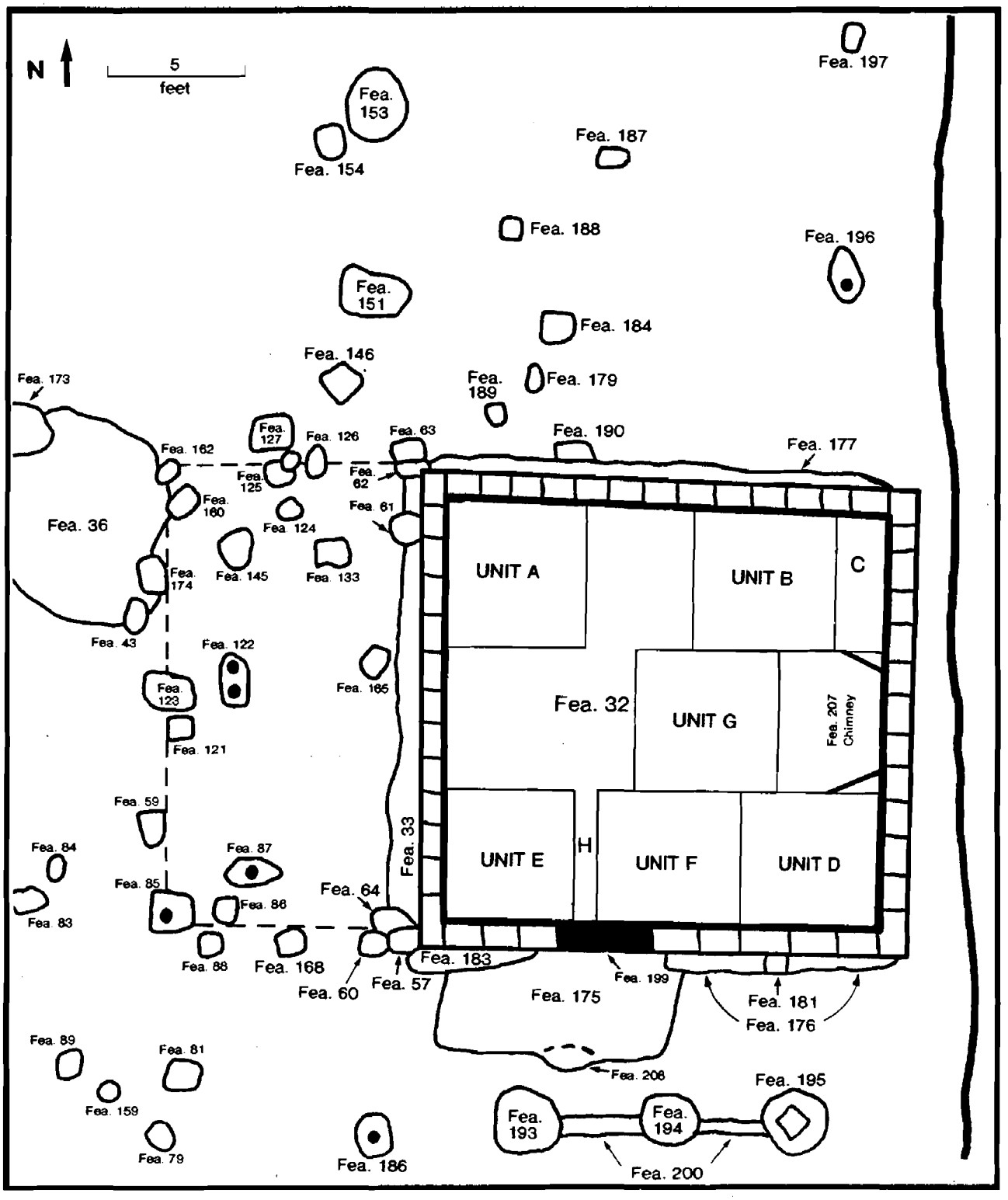
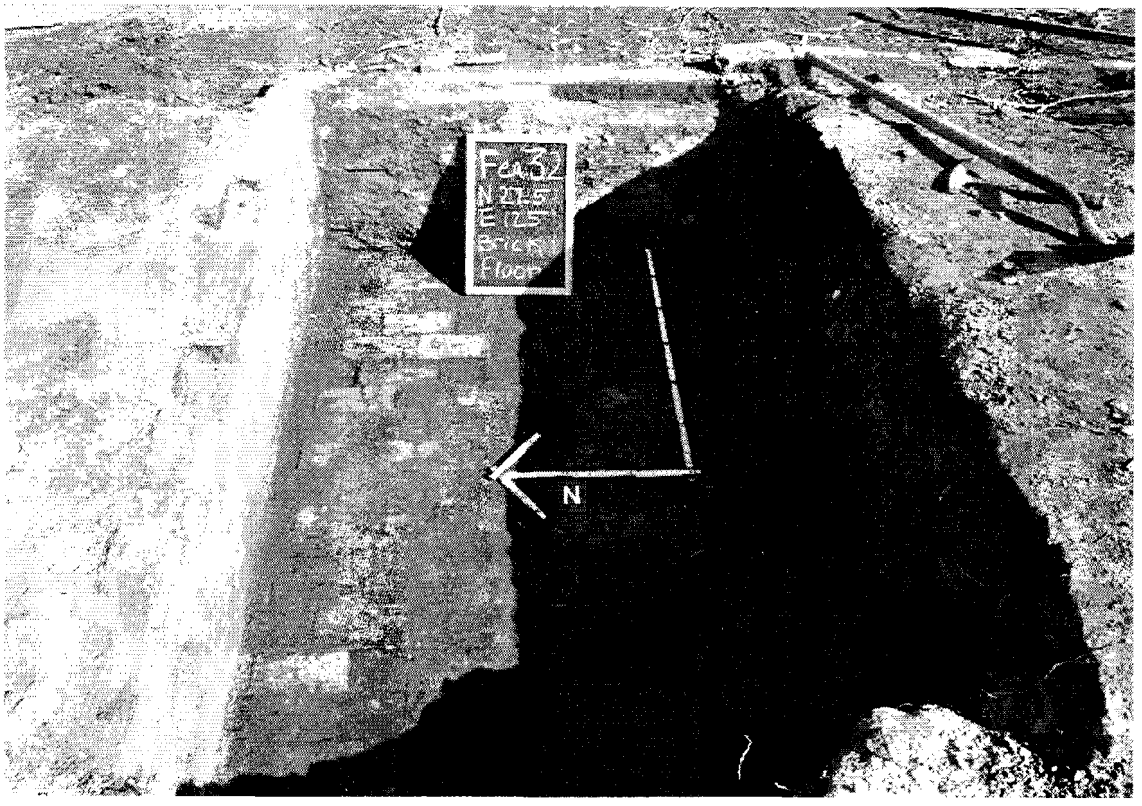


PLATE 7

Excavated Sample of Units B and C in Feature 32 (Cellar)



Foundation and Cellar

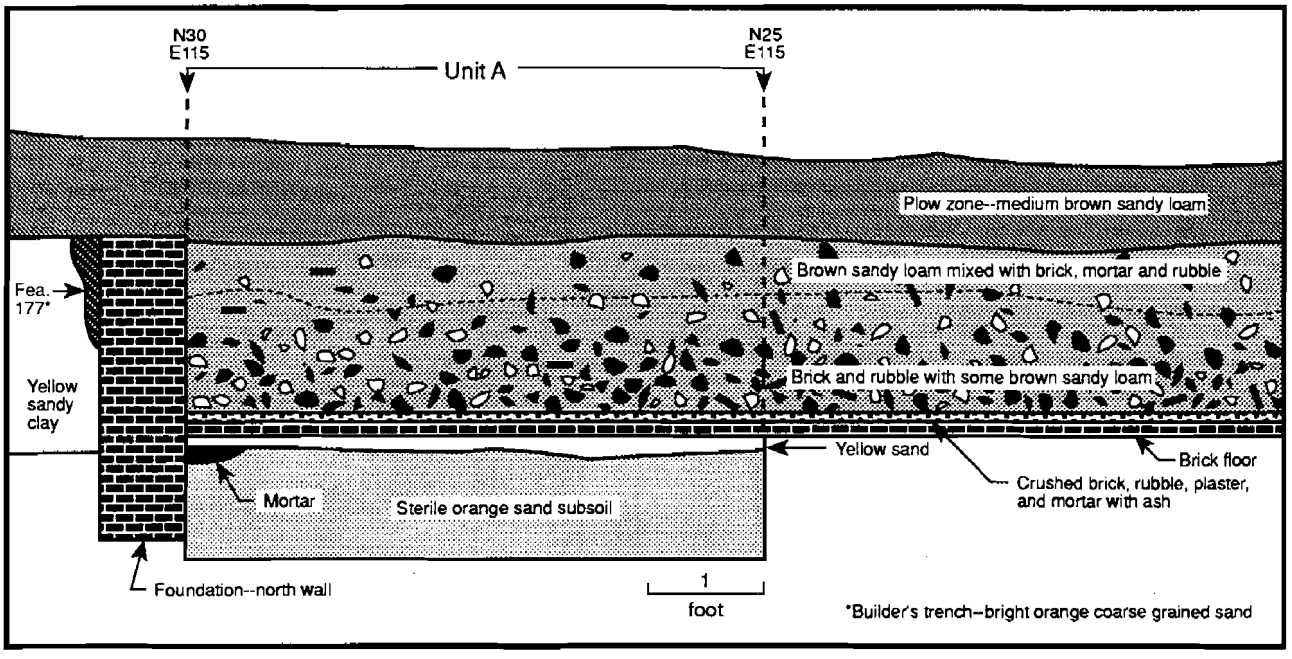
The brick walls of the foundation were identified during the Phase I/II test unit excavations. Two courses of brick, 0.7' wide, were exposed at the base of the plow zone (1.0' below ground surface). The plow zone from the surrounding area was hand excavated and exposed four foundation walls, a brick and rubble filled cellar, builder's trenches, and a possible bulkhead entrance. Dimensions of the dwelling were determined to be 17.6' east to west and 17.4' north to south, measured from the outside brick foundation walls. The foundation walls averaged 0.7' wide and were constructed in an American common bond pattern.

Four (5' x 5') units (A, B, C and E; Figure 11; Plate 7) were excavated inside the foundation walls to determine the type of rubble deposition and the depth of fill. Figure 12 shows a profile of the east wall of Unit A located in the northwest corner of the foundation. The first soil level below the plow zone varied between 0.4' and 0.6' in depth and consisted of medium brown sandy loam mixed with brick and rubble. The second soil level of the cellar fill consisted of large amounts of brick, rubble, plaster, and mortar. The third level was a very thin (0.2') layer of smaller, crushed brick, rubble, plaster, and mortar mixed with ash. A brick-laid cellar floor was exposed beneath this level. The units were excavated in 0.4'arbitrary levels within cultural levels, to a general depth of 2.0' below subsoil.

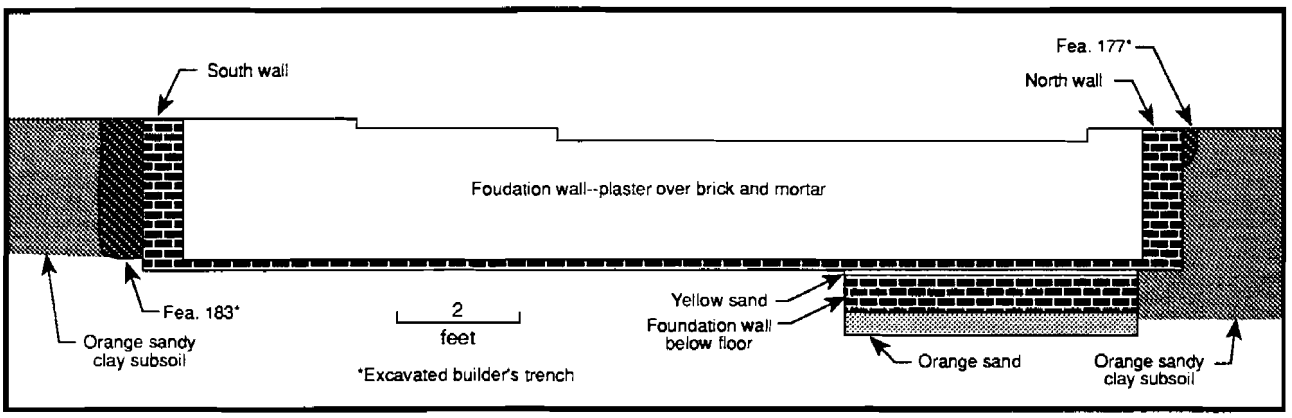
FIGURE 12

East and West Wall Profiles of Feature 32 (Cellar)

EAST WALL



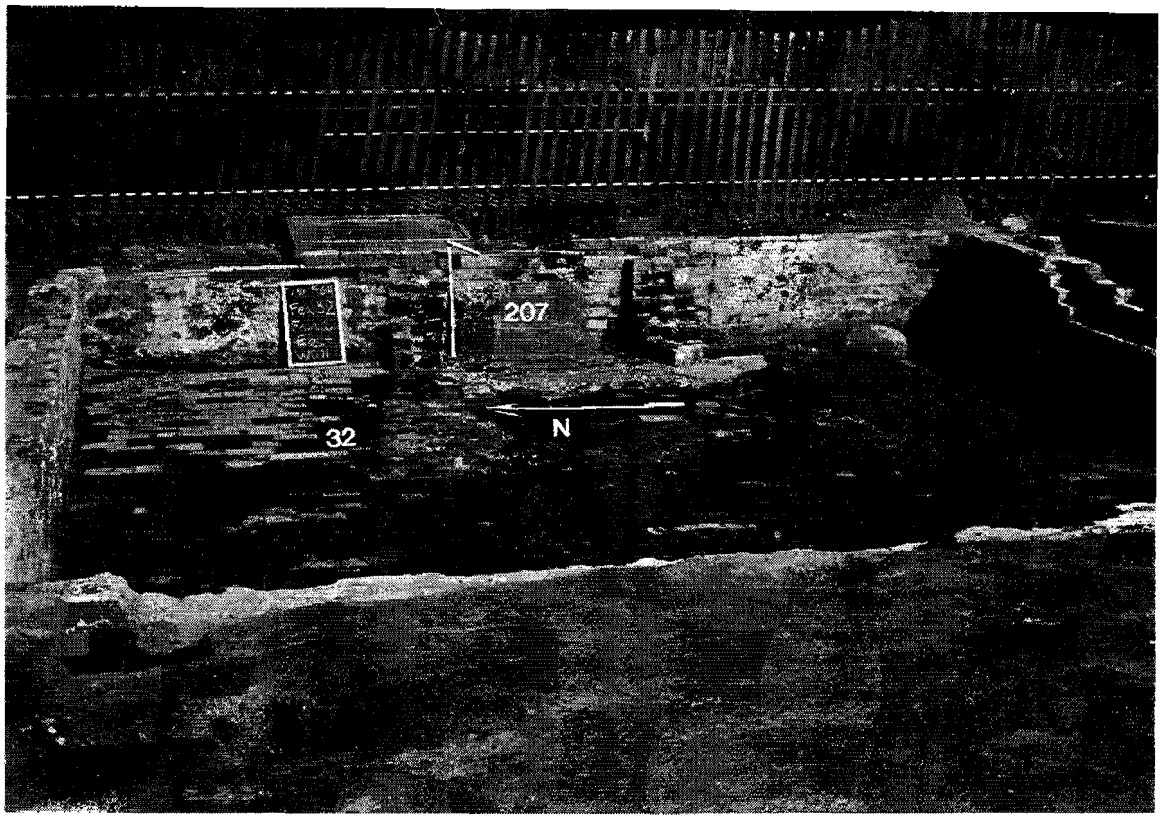
WEST WALL



Over 2,000 artifacts from the various levels included bottle, window, table, jar, and household glass, cut and wire nails, brick, mortar, toys, buttons, bones, tin cans, bed springs, and automobile parts. Only 142 ceramic sherds, including whiteware, ironstone, yellowware, bone china, redware, Rockingham, and one pearlware fragment were excavated from Unit A, Unit B, Unit C (a 2'x 5' extension of Unit B) and Unit E (Figure 11; Appendix I). Large amounts of frosted plate glass were discovered beneath the rubble fill, lying atop the brick floor of the northeast corner (Unit C). In addition, a 1914 Wheat cent was excavated from Level 2 (0.4' to 0.8') of Unit B, and two Indian Head cents (1863 and 1864) were excavated from Level 5 (1.6' to 2.0') of Unit E.

PLATE 8

East View of Excavated Feature 32 (Cellar) and Feature 207 (Chimney Base)



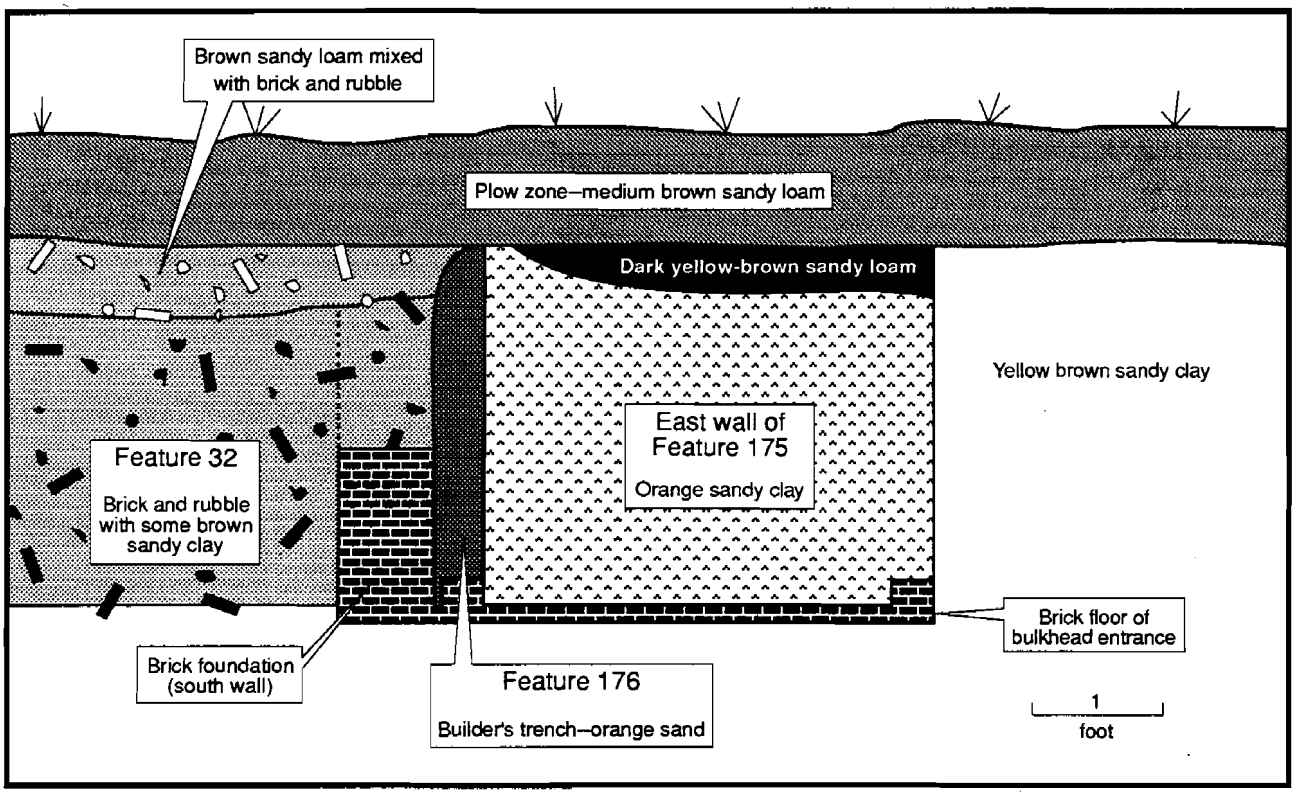
Based on the amount of mid-twentieth century artifacts excavated from the units, the cellar was determined to be filled with demolition debris from the razing of the dwelling in the 1930s. The remainder of cellar debris was excavated via backhoe, and artifacts were selectively collected and bagged as unprovenienced cellar debris (Appendix I).

After the removal of the brick and rubble fill, several observations were apparent. A brick and cement chimney base was unearthed at the center of the east wall (Feature 207; Plate 8). The brick interior walls of the foundation were covered with mortar and plaster (Plate 8). Except for a disturbed area in front of the chimney and in the southeast corner of the cellar, the floor was dry-laid brick (Plate 8). The brick was removed from Unit A, exposing a thin (0.2') layer of dark yellow sand, followed by 0.8' of sterile orange sand (Figure 12). The brick foundation wall continued 0.8' below the base of the brick floor (Figure 12). Artifacts from below the floor in Unit A included one window, one bottle, and one unidentifiable glass fragment, one plaster fragment with white paint, and eight animal bone fragments.

In the two areas of the cellar floor that had a very disturbed and broken brick covering, three units (Units D, F, and G) were excavated and the disturbed medium brown loam soils were screened. Unit D was placed in the southeast

FIGURE 13

East Wall Profile of Feature 175 (Bulkhead), Feature 176 (Builder's Trench), and Feature 32 (Cellar)



corner of the cellar (Figure 11). Testing recovered a large quantity of artifacts including bottle, window, household, and lamp glass, cut, wire and unidentifiable nails, glass, bone, metal, plastic, and mother-of-pearl buttons. Other artifacts included a belt buckle, butter knife, spoon, fork, plastic, plaster, one glass bead, clay and glass marbles, slate pencils, kaolin pipe fragments, animal bones, bone china, stoneware, whiteware, ironstone, and an 1882 Indian head cent (Appendix I). The soil below this 0.4' deep disturbed brown loam soil was a sterile orange sand. Unit F was placed next to Unit D and contained similar artifacts, but was 0.7' deep (Figure 11; Appendix I). The soil below the disturbed brown loam of Unit F was also a sterile orange sand. A small area between Units F and E contained a deeper pocket of disturbed brown loam. This unit (Unit H) produced window and household glass, cut and wire nails, three buttons, animal bone, one copper costume jewelry piece, kaolin pipe stems, one redware, and one ironstone fragment (Figure 11; Appendix I).

The displaced and broken bricks located in front of the chimney (Unit G; Figure 11) were removed and the brown loam below was screened for artifacts. Unit G contained jar, window, lamp, and unidentifiable glass, cut and wire nails, shell, glass, mother-of-pearl and bakelite buttons, slate pencils, bone china, American porcelain, redware, whiteware, and ironstone (Appendix I). The soil below the 0.7' deep brown loam consisted of a sterile orange sand.

The artifacts recovered from Units D, F, G, and H were found in disturbed soils that were in direct contact with the demolition debris and therefore were a mix of nineteenth and twentieth century artifacts. Only the artifacts found below the intact floor of Unit A could accurately date construction. Unfortunately, the only artifacts from this unit were glass, plaster and bone.

PLATE 9

Opening Plan View of Feature 175 (Bulkhead)

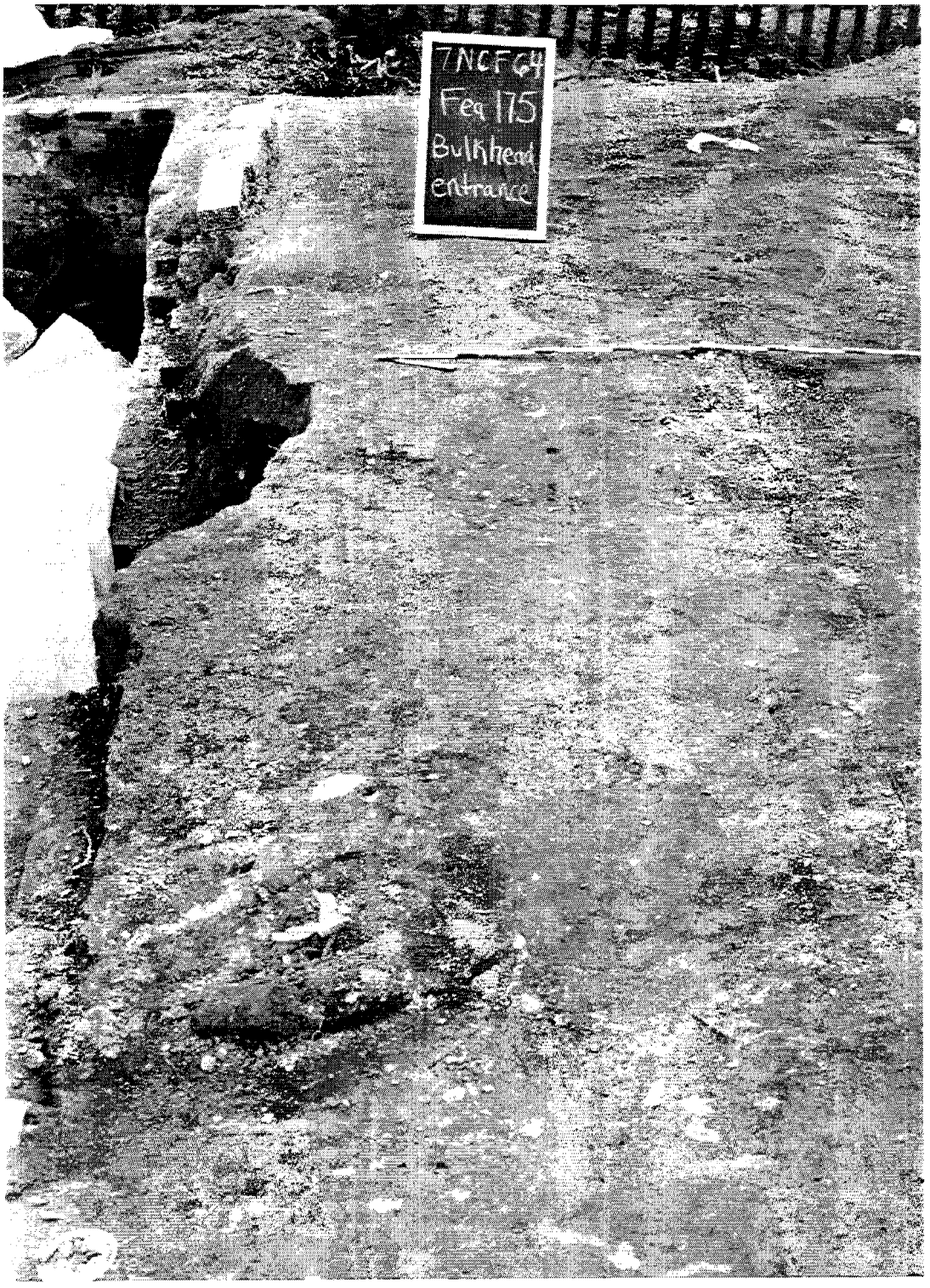
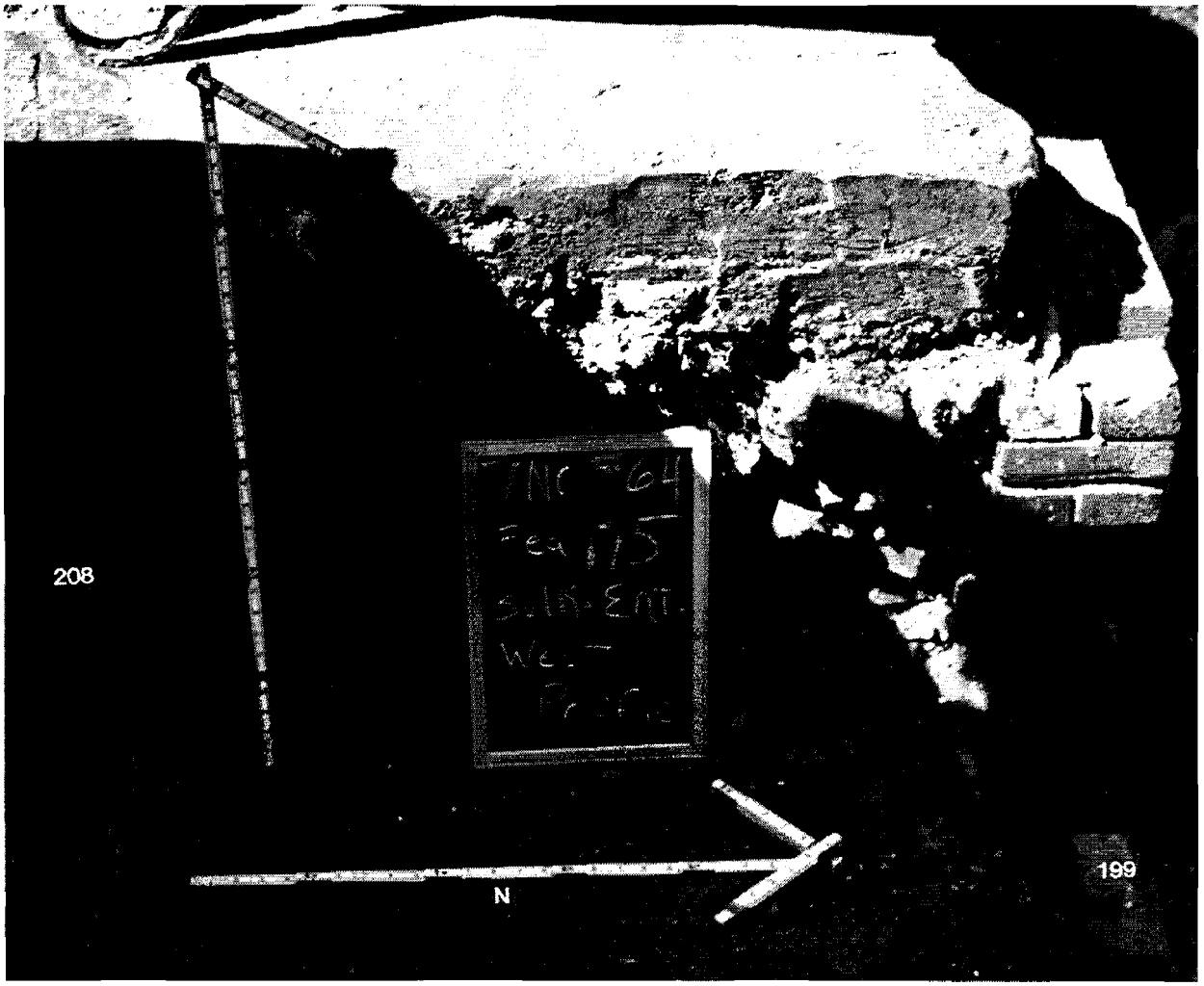


PLATE 10

West Wall Profile of Feature 175 (Bulkhead) and Feature 208



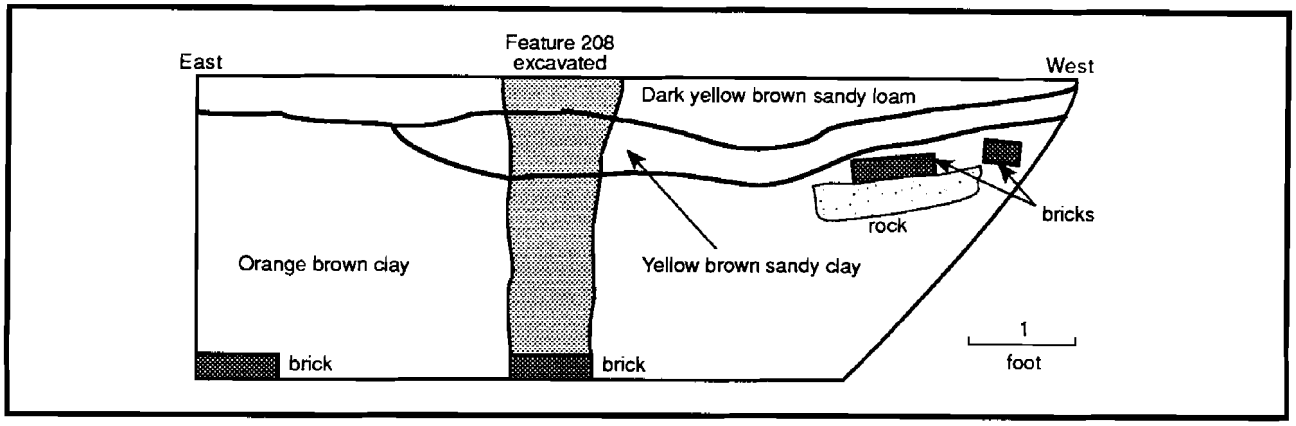
Bulkhead Entrance

A rectangular (3.5' x 8.2') gray clay stain was evident along the western half of the south wall (Feature 175; Figures 11 and 13; Plate 9; Appendix III). The east half of Feature 175 was excavated in two cultural levels. Level I was a 0.4' deep gray clay "cap" containing one fragment of whiteware, four bottle, three window, one table, one milk and 11 unidentifiable glass fragments, four cut and six wire nails, four unidentifiable metal fragments, and brick fragments (Appendix I). Level 2 was 2.0' deep and filled with brick and rubble demolition debris (Plate 10). Artifacts found in this level consisted of 55 fragments of glass including molded bottle glass, jar glass, window, table, and milk glass. Two cut, three wire, and four unidentifiable nails, five unidentifiable metal fragments, wood, bone, brick and fragments of bone china, whiteware, and redware ceramics were also excavated (Appendix I). An intact dry-laid brick floor appeared below the brick debris level. A 3.0' x 0.8' broken cement threshold was evident between the bulkhead entrance brick floor and the cellar floor (Feature 199; Plate 10; Appendix III).

The west half of the bulkhead entrance (Feature 175) was excavated exposing an angled west wall. A large rectangular rock with mortar and brick protruded into the feature from the south wall along the angled wall suggesting

FIGURE 14

South Wall Profile of Feature 175 (Bulkhead) and Feature 208



stone steps leading into the entrance (Figure 14; Plate 11). A support post (Feature 208) for the bulkhead entrance was evident in the center of the south wall at N11.7E114.2 (Figures 11 and 14; Plate 10). The feature fill consisted of an unconsolidated sandy clay flecked with brick containing no artifacts, except for a brick located at the base of the feature.

Builder's Trenches

Four builder's trenches were identified and excavated along the exterior of three of the four foundation walls (Features 33, 176, 177, and 183). A linear orange coarse-grained sandy feature was evident along the south wall of the brick foundation and intruded 2.3' into the sterile yellow brown clay of the angled west wall of the entrance (Feature 183; Figure 11; Plate 11; Appendix III). Excavating the builder's trench exposed the south wall of the brick foundation, but yielded no cultural material.

Feature 176 extended 8.0' from the east wall of the bulkhead entrance to the southeast corner of the foundation. This builder's trench consisted of orange coarse-grained sand and contained no cultural material (Figure 13; Plate 12; Appendix III). A square brown sandy loam stain (Feature 181) intruded into Feature 176 at N15.3E120.9. Feature 181 was excavated to a depth of 1.3' and contained no cultural material except for a brick that was found on top of the 0.5' square stain. This feature was probably a support post for a porch along the south side of the foundation (Figure 11; Appendix III).

A builder's trench located along the north foundation wall was excavated to a depth of 0.7' below subsoil. Feature 177 was 16.0' long and only 0.5' wide and consisted of sterile orange coarse-grained sand (Figure 11; Appendix III). A 1.2' x 0.9' square brown sand stain intruded into Feature 177 at N45.3E115.3. This feature (Feature 190; Appendix III) was excavated to a depth of 0.4' and contained no cultural material. Feature 33 consisted of a linear 16.0' x 1.2' orange coarse-grained sand stain extending north-south along the west foundation wall (Figure 11; Plate 13; Appendix III). Three feet of this feature was excavated during the Phase II investigations from Unit N20E110 to N23E110 (Lothrop et al. 1987). The remainder of Feature 33 (Feature 2 in Phase II) was excavated to a maximum depth of 1.6'. Depth and width of this builders trench varied and contained no cultural material. No builder's trench was evident along the east foundation wall due to disturbance caused by the construction of Route 896.

Addition

The remains of a possible post-supported addition were identified on the west side of the foundation (Figure 11; Plate 6). Consisting of 26 posts, the addition measured 17' x 9'. The depth and shape of each feature can be seen

PLATE 11

West Wall Profile of Excavated Feature 175 (Bulkhead) and Feature 83 (Unexcavated Builder's Trench)

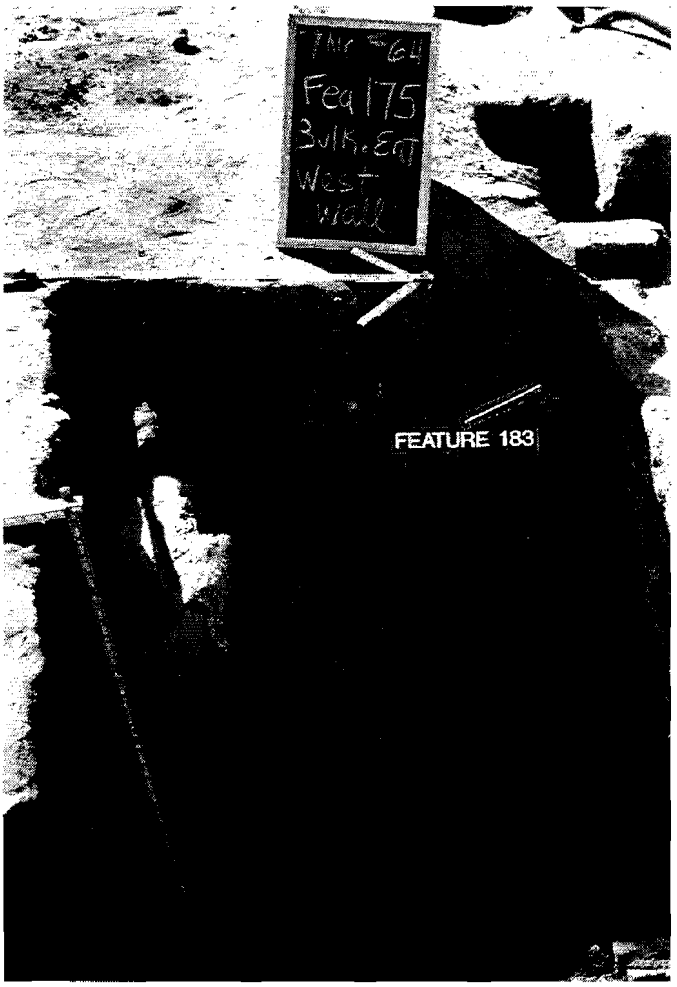
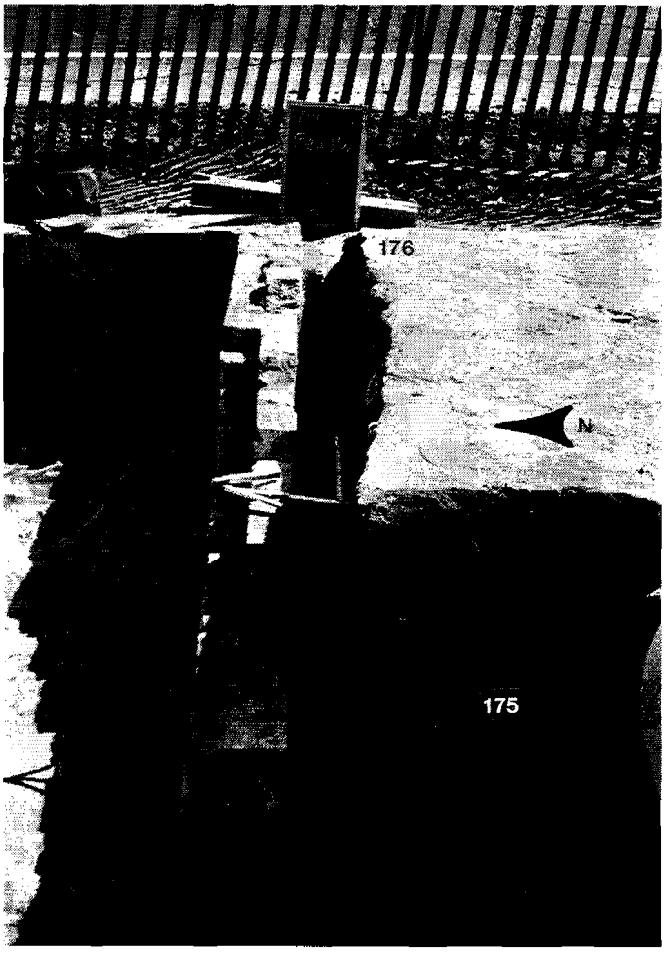


PLATE 12

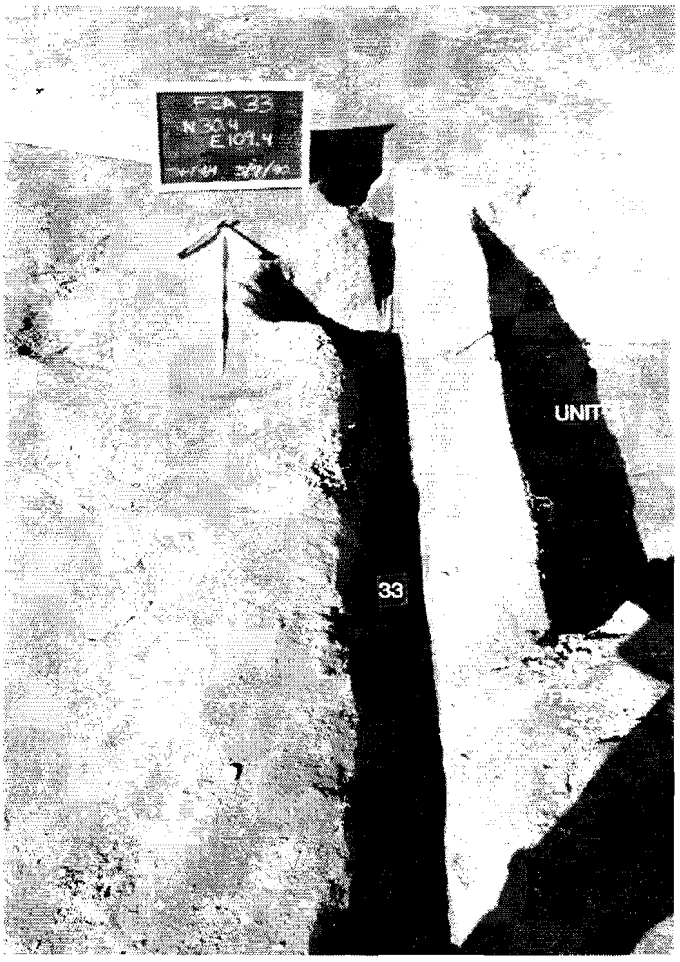
East Wall of Feature 175 (Bulkhead) and Feature 176 (Excavated Builder's Trench)



on Figure 15 (Appendix III). The south wall of the addition was confirmed by Features 57, 60, and 64 (southeast corner posts/replacement posts), Features 168, 86, 88, and the southwest corner post and mold Feature 85. Support posts for the west wall included Features 59, 121, 123, 43, 174, 160 and the northwest corner post, Feature 162. Features 59 and 123 were spaced further apart than the other support posts, suggesting an entryway along the west side of the addition (Figure 11). The north wall of the addition was supported by Features 125 (post hole and mold) and 126, and Features 62 and 63 which would have been a post and post replacement in the northeast corner. Features 62 and 63 intruded into Feature 33, the builder's trench located along the west wall of the house foundation (Figure 11). Feature 61, a post hole and mold intruding into Feature 33 (builder's trench), was probably a support post for the east wall of the addition (Figure 11). The presence of intruding posts into the builder's trench confirms the sequence of construction. Features 87, 122, 124, 133, 145, and 165 were possible support joists.

PLATE 13

Plan View of Northeast Corner of Foundation and Feature 33 (Builder's Trench)



Artifacts excavated from the addition's support posts included window, bottle, jar, and household glass. Only one feature contained wire nails (Feature 124), the other features had either cut or unidentifiable nails. Ceramics excavated from the features included redware, whiteware, ironstone, yellowware, bone china, and one fragment of pearlware and yielded a mean ceramic date of 1861 (Appendix I).

Porch

As mentioned previously in the site History, the Biddle family reported that a wooden porch was located on the south side of the house (the side facing the mansion lane). Three wooden posts supported the raised porch and five steps led from the ground to the porch (Figure 8). The Biddles' recollection of the house was supported archaeologically through the excavation of three large post features and a sill located five feet south of the south foundation wall (Figure 11; Plate 6; Appendix III). Figure 16 and Plate 14 show the profiles each feature. Feature 193 consisted of a post mold containing brick fragments, 29 unidentifiable nails, one cut nail, six window glass, and three lamp glass fragments, and one whiteware fragment and a post hole containing 18 unidentifiable nails, 1.5 grams of brick, glass fragments (17 window, one lamp, one milk, and one unidentifiable), one safety pin, and ceramics (three whiteware and one redware).

The center porch support post (Feature 194) had no apparent post mold. Artifacts from Feature 194 included glass fragments (three bottle, 16 window, two lamp and two unidentifiable), four cut, six wire and 23 unidentifiable nails, 400 grams of brick, one metal button, five ironstone fragments, and five whiteware fragments. A large flat rock was exposed at the base of the post, perhaps used in leveling the wooden posts during construction (Figure 16). Feature 195 was a square post mold within a circular post hole. A large rock was excavated from the surface of the feature on the south side of the post mold, probably used as a chinking stone for post support (Figure 16). Feature 195 contained 18 window, three bottle, and two lamp glass fragments, two slate pencils, seven wire nails, 43 unidentifiable nails, 409 grams of brick, ceramic fragments of whiteware, redware and white stoneware, and one partially obscured (1865 or 1866) Indian Head cent that was excavated from the south half of the post hole fill. The presence of this coin in the post hole suggested that the porch was constructed no earlier than 1865 or 1866.

A narrow linear dark brown loam stain was observed between Features 193 and 194 and between 194 and 195 (Feature 200; Figures 11 and 16; Plate 14; Appendix III). Feature 200 was excavated to a maximum depth of 0.4' and was 0.7' wide. Artifacts found in this feature included one window glass fragment, two unidentifiable nails, and one gram of brick. This feature was probably a sill support for the porch.

FIGURE 15

Western Addition Post Profiles

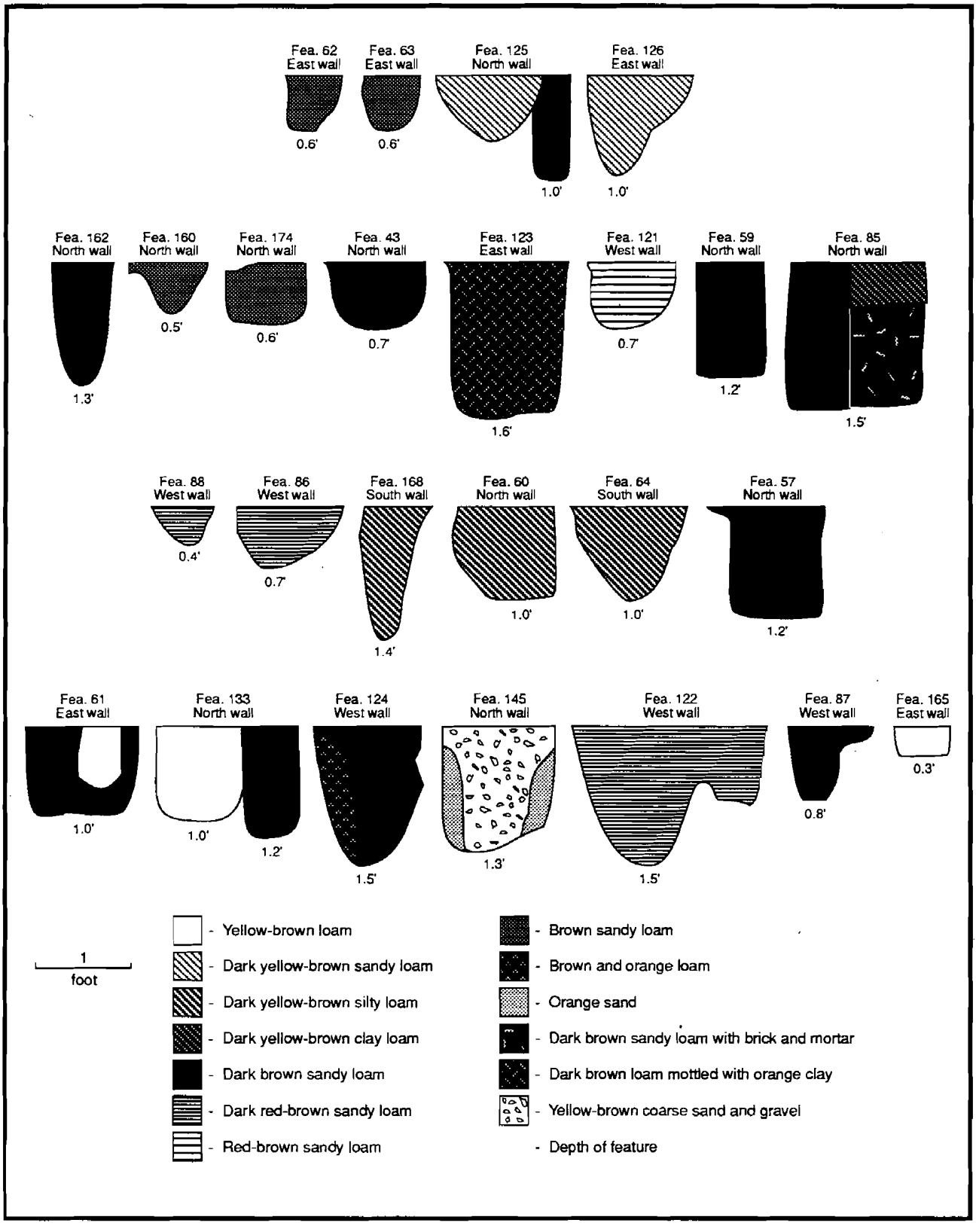
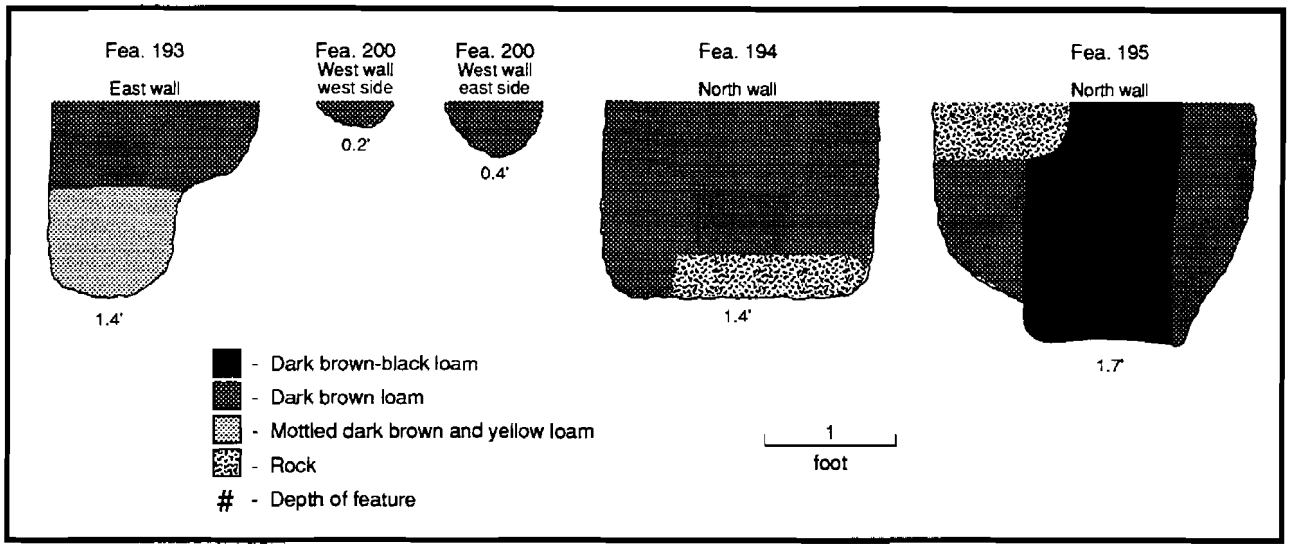


FIGURE 16

Porch Post and Sill Profiles



Outbuilding I

Outbuilding I was located 30 feet west of the foundation and was defined by four paired post mold/hole features arranged in a rectangular pattern measuring 12' north/south and 8' east/west, with a possible 2'x 4' entrance on the northwest side (Figure 10; Plate 15). Three of the tie-beam pairs (Features 48 and 47; Features 132 and 55; Features 137 and 56), each pair placed approximately 7' east/west apart from one another, provided the structural support for the main portion of the structure (Figure 10). One tie-beam pair (Features 130 and 139) and three unpaired posts (Features 131, 140, and 136) provided the framework for the entrance of the structure (Figure 10). Figure 17 shows the profiles of each of the posts for Outbuilding I. Each paired posts seemed to have similar depths, soils, and shapes. Artifacts found in the post features of Outbuilding I included wire and cut nails, window, bottle, table, and lamp glass, brick, unidentifiable metal, whiteware, redware, American porcelain, pearlware, and ironstone (Appendix I).

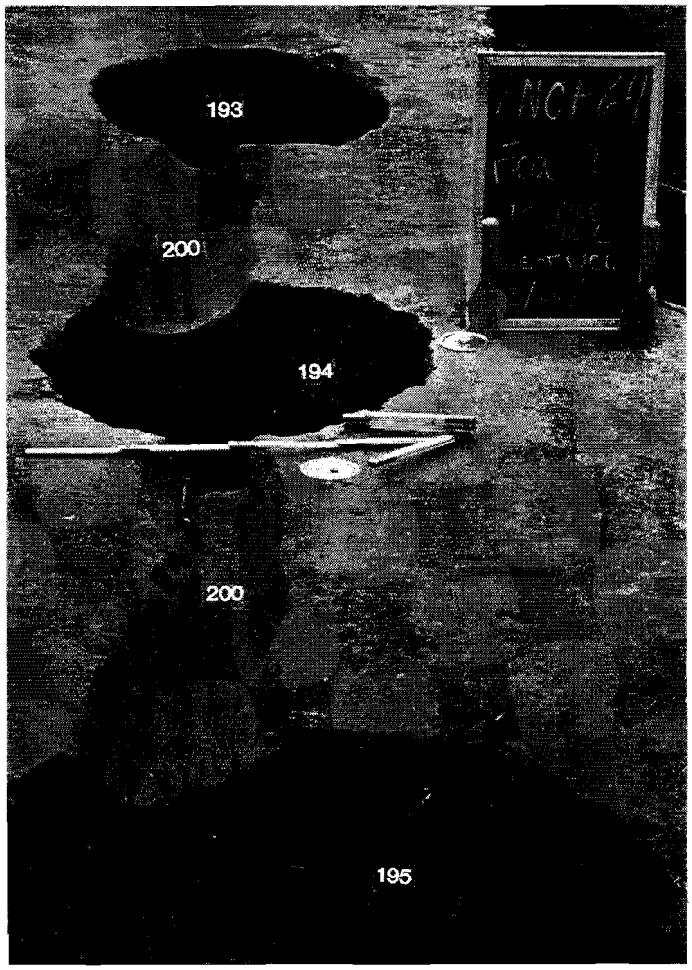
Privies

Feature 170, a large (6.6' north/south by 5.0' east/west) circular/oval dark brown loam stain located at N72E64, was interpreted as a privy pit (Figure 10; Plate 16). Feature 170 was defined by three soil types at the surface of the subsoil level. An oblong dark brown silty loam stain (Soil #1) was excavated in one cultural level. This stain was encompassed by a semi-circle of medium brown loam (Soil #2), that was excavated separately. At the outer limit of Soil #2, a lighter brown loam (Soil #3) was observed encompassing the semi-circle of medium brown loam. Each soil type was excavated as a separate cultural level (Figure 18). The west half of the feature was excavated to a depth of 0.7', exposing the east wall at E64 (Figure 18). The northern portion of the feature extending from the semi-circle was then excavated. This portion contained only Soil #1 and was 0.7' deep. The remainder of Feature 170 was then excavated. A concentration of glass was observed at the northeast portion of the east half. Feature soil #1 contained the majority of the artifacts and Soil #3 had the least (Table 7). A fragment of a redware chamber pot was excavated from Soil #1.

A flotation sample was taken from Soils #1 and #2. The heavy fraction from Soil #1 contained six window, three bottle, and two lamp glass fragments, one metal buckle, one cut, and one unidentifiable nail, one fragment of whiteware, shell, and brick. A blown glass medicinal vial fragment manufactured in the 1850-1860s found in the Soil #1 flotation sample suggested a nineteenth century usage of the privy. The light fraction contained seeds including wild grape, raspberry, pigweed (amaranth), and grass. The heavy fraction from Soil #2 contained five window, eight

PLATE 14

Plan View of Excavated Support Posts and Sill



lamp, and two household glass fragments, one nail, and six unidentifiable metal fragments. Seeds were also found in the light fraction from Soil #2 including raspberry, grape, pigweed, and dock (rumex crispus).

Feature 36 was a large oval dark brown sandy loam stain flecked with charcoal located along the northwest portion of the addition (Figures 10 and 11; Plate 17). It measured 7.7' north/south and 8.2' east/west, and was 0.6 feet deep. A Phase II test unit had exposed the southern limit of Feature 36 (Figure 19). Small, circular, shallow pockets of brown loam were discovered at the base of the feature and excavated separately (Figure 19). This feature contained 238 artifacts including 21 window and 18 bottle glass fragments, 18 cut, four wire, and 29 unidentifiable nails, 92 bone fragments (some burned), and 36 ceramic fragments (24 whiteware, two yellowware, seven ironstone, and three redware).

An oblong dark brown sandy loam stain containing a larger quantity of charcoal was located along the northern limit of Feature 36. The concentration of charcoal, burned soil, and artifacts served to distinguish this feature (173) from Feature 36. Feature 173 was 0.7 feet deep and contained a level of burned soil and wood (Figure 19; Plate 17). Artifacts excavated from this feature included 30 fragments of glass, 31 nails, two buttons, brick, 16 bone fragments, two whiteware, and 28 fragments of a boot gum sole (Appendix I). Features 36 and 173 were located in the area where Mr. Biddle remembered the presence of a one-hole wooden outhouse, ten feet west of the brick house (Figure 9). The disturbed soil of these features could be the remains of a shallow privy, that was cleaned out periodically through an opening in the backside of the wooden outhouse.

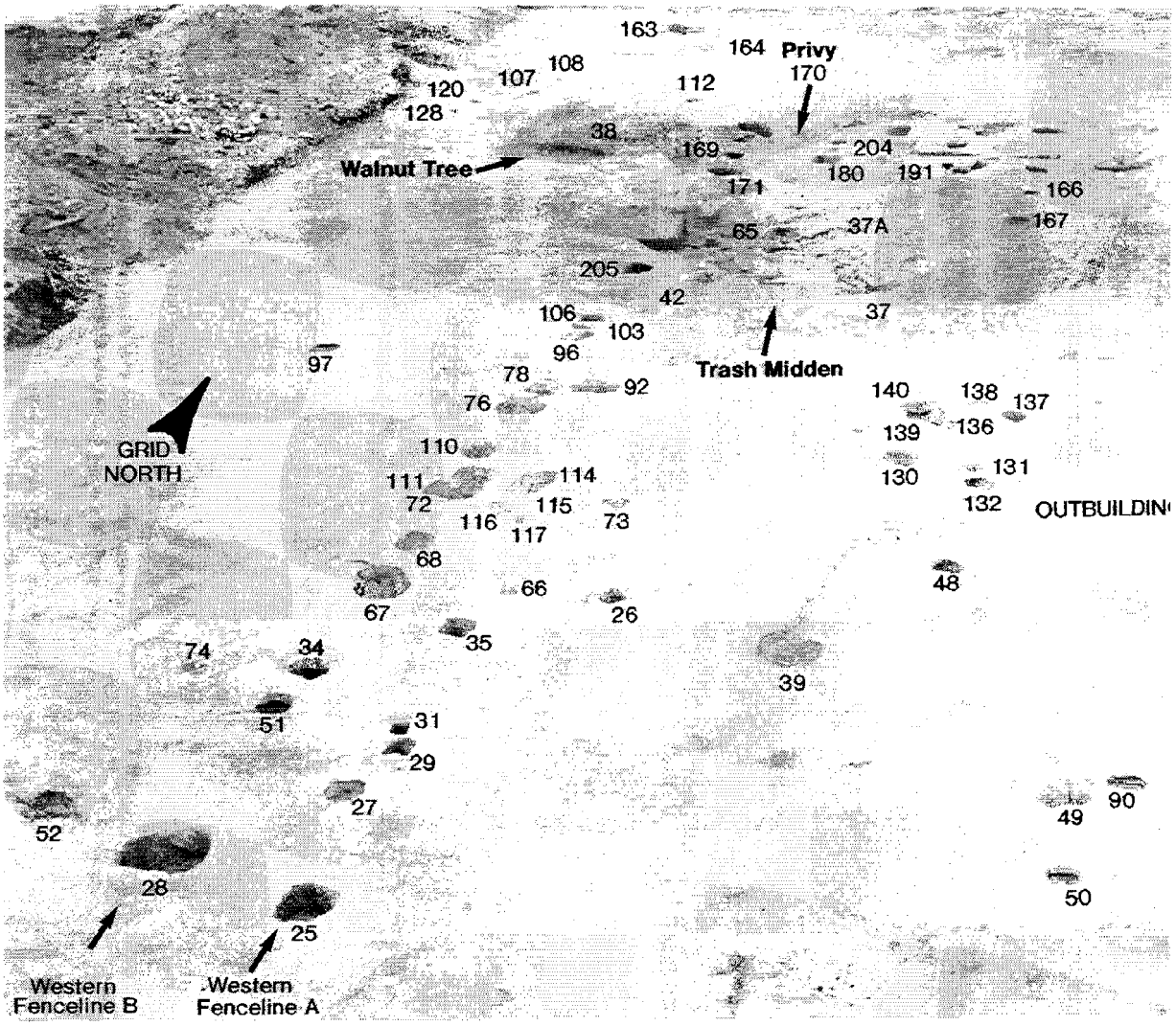
Trash Pit Features

Five trash pit features were excavated at the Cazier site (Features 39, 54, 91, 151, and 153; Figure 10). All features were less than 2.5 feet wide and 0.8 feet deep. Table 8 presents a summary of the location, dimension, and depths of each trash pit feature. Features 151 and 153 were the largest trash pits and produced the greatest amount of artifacts. Feature 151, located six feet north of the foundation, contained 237 artifacts, including 21 bottle glass fragments, 29 nails, two buttons, one key, one slate pencil, and 154 miscellaneous metal fragments (109 tin can fragments) and 15 whiteware, three ironstone, four yellowware, one Rockingham, and one redware ceramic fragments. One hundred seventy-seven total artifacts were excavated from Feature 151, including 98 lamp glass fragments, 40 nails, and four whiteware, one pearlware, and one brown stoneware ceramic fragments.

Feature 91 was a circular, shallow feature that contained eleven total artifacts, including nine whiteware ceramic fragments. This feature was located two feet north of the north fenceline, near the privy (Feature 170).

PLATE 15

Aerial View of Outbuilding I and Fencelines A and B



Features 39 and 54 were located between the foundation and the western fencelines (Figure 10; Table 8). Seven artifacts, including one ironstone fragment, were excavated from Feature 54. Feature 39 contained only one brick and one redware fragment.

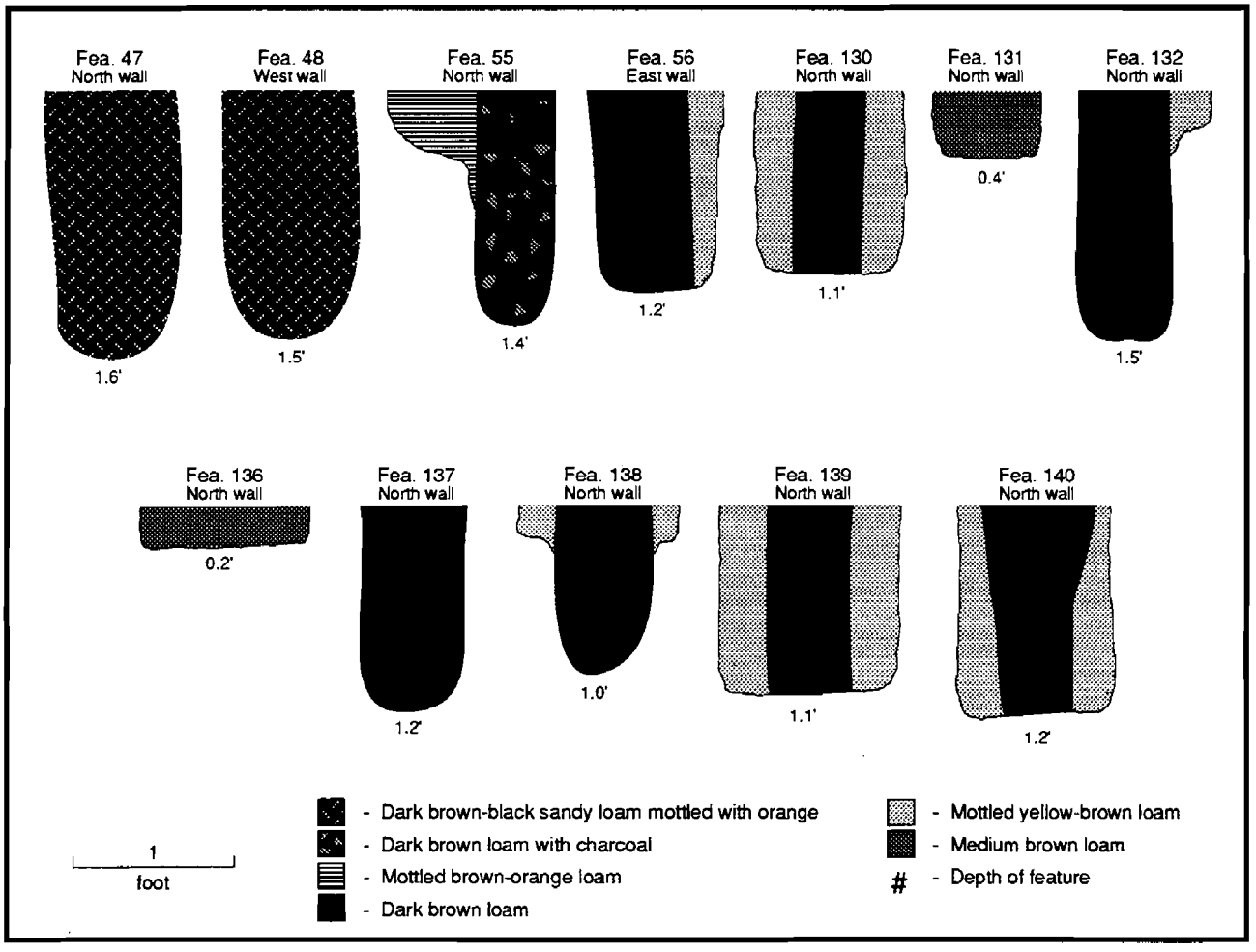
Trash Midden

Features 37, 37A and 65 were three separate amorphous features located south of the Feature 170 (Privy) at N55E65 (Plate 15). Feature 65 was discovered during the Phase II excavations. Lothrop et al. (1987) placed a shovel test pit, as well as a test unit at N60E60 and discovered 1.1 feet of dark brown feature soil below the plow zone. During the Phase III excavations this feature was renumbered from Feature 7 to Feature 65.

The north half of Feature 65 was excavated to provide a cross-section of the feature at N60. Feature 65 measured 10 feet east/west and was 1.1 feet deep (Figure 20). The test unit and shovel test pit were placed in the northwest corner of this feature and were clearly noticeable in the profile wall (Figure 20). A circular orange clay stain

FIGURE 17

Outbuilding I, Post Profiles

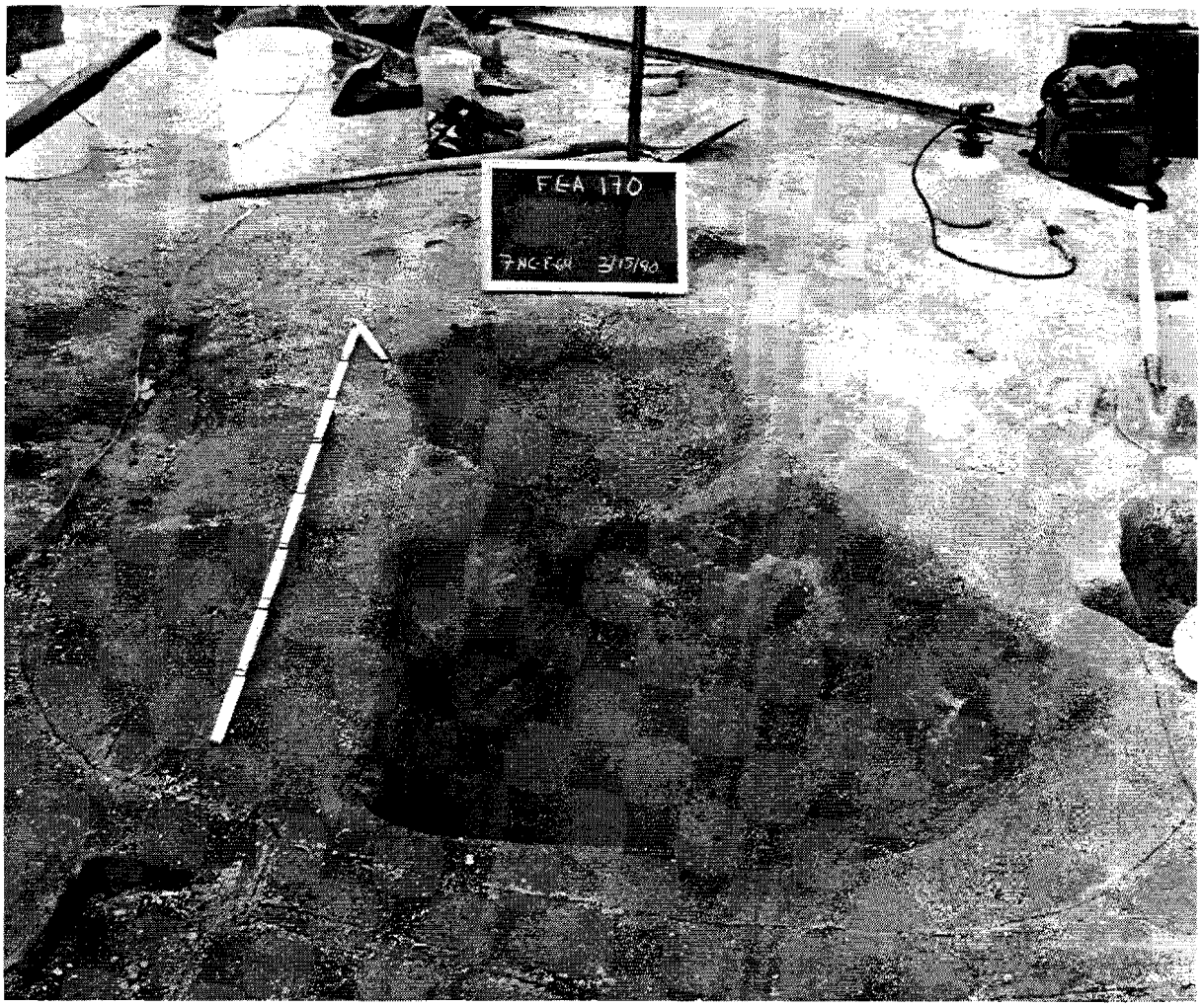


was noticed to the east of the test unit. It extended 0.3 feet into the feature and contained no cultural material. The remainder of the feature fill was excavated as one cultural level, consisting of a dark brown loam. The feature soil west of the test unit was a mix of dark brown loam and orange clay. The southern half of Feature 65 was excavated in two quarters. A profile of the west wall at E61 revealed an orange sandy clay horizon (I) above a brown loam feature soil (II) (Figure 20; Plate 18). The southeast quarter of Feature 65 seemed to smear into Feature 37 during excavation. At the base of this area, a large tire tread indentation was identified. Artifacts excavated from Feature 65 totaled 1,077 including 315 glass fragments (95 window), 361 nails, 11 buttons, one slate pencil and 166 ceramic fragments (110 whiteware, 33 redware, ironstone, stoneware, pearlware and yellowware; Appendix I).

The east half of Feature 37A was excavated to provide a profile of the west wall at E67 (Figure 20). The feature soil was a yellow sandy loam mottled with dark brown loam and extended 0.7 feet into the subsoil. A tractor tire tread indentation was also present at the undulating base of this feature (Figure 20). Three hundred ninety-five artifacts were excavated from Feature 37A including 160 glass fragments (67 window), 126 nails, and 96 ceramic fragments (78 whiteware, ironstone, redware, yellowware, Rockingham, and American porcelain; Appendix I).

PLATE 16

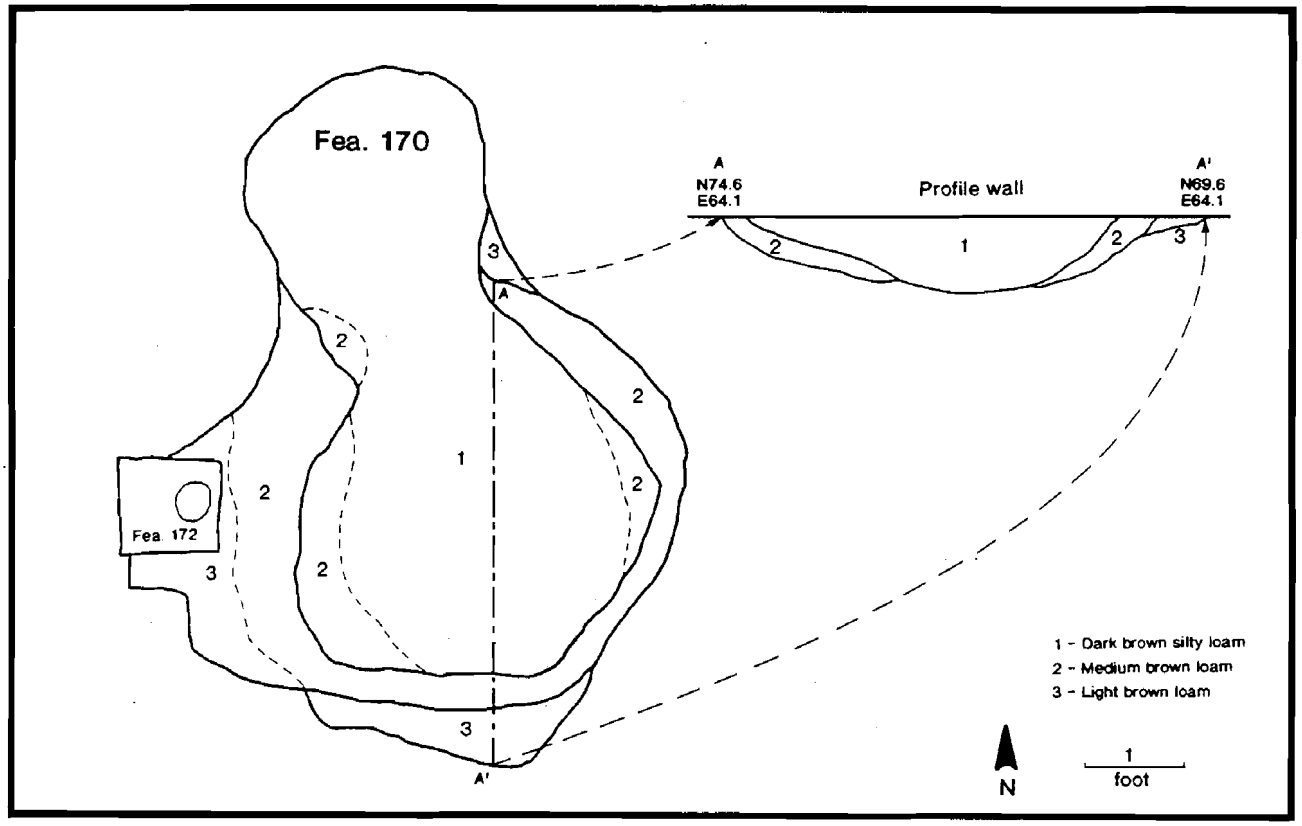
Plan View of Feature 170 (Privy)



Feature 37 measured 7'x 5' prior to excavation, but during excavation of the north half, the northern limits disappeared and merged with the southern limits of Feature 37A. The south wall profile of Feature 37 at N50 exhibited one soil level — a dark brown sandy loam, that extended 0.8 feet into the subsoil (Figure 20). Another tractor tire tread indentation was present at the uneven base of this feature (Figure 20). Artifacts excavated from Feature 37 were 188 fragments of glass (58 window, 85 unidentified), 139 nails, and only three whiteware ceramic fragments.

Although Features 37, 37A, and 65 did not have similar soils, the individual feature limits identified at the surface of the subsoil merged into one another during excavation (Plates 5 and 15). In addition three tractor tire tread indentations were observed at the base of the feature fill. The direction of the indentations seemed to be from southwest to northeast. Together, the features seemed to form a 10'x 7' rectangular, undulating, shallow pit. Any fencepost features belonging to western Fenceline B were disturbed by the artifact and soil deposition of this trash midden. This disturbed area was probably caused by the root system of the walnut tree located to the northwest or, based on the amount of artifacts excavated from these features, this could have been a trash dumping area for the residents of the house. It was located 50 feet from the house, along the western fenceline.

FIGURE 18
Plan View and East Wall Profile of Feature 17 (Privy)



Fencelines

Five distinct fencelines and one fragmentary fenceline were discerned from the post hole and mold patterns present at the Cazier site. A southern fenceline, two western fencelines (Fenceline A and B), a northern fenceline, a central north/south fenceline, and a fragmented central north/south fenceline, as well as numerous unaligned post holes are shown on Figure 10 (Plates 5 and 15). Table 9 contains a summary of the fenceline features, their depths and dimensions, and comments on their appearance and excavation.

The southern fenceline consisted of a series of thirteen post hole and mold features beginning at S8E112 and extending west to S8W88. These features ranged from 4.0 to 6.0 feet apart. Only two of the features exhibited evidence of square posts (Features 5 and 9), the remainder of the features were circular or square post holes containing circular post molds, indicating that the fence-posts were round. Features 7, 8, 9, 10, 11, 13, 14, 20, and 23 were 0.8 to 1.25 feet in depth, while Features 2, 5, and 12 were deeper, extending 1.4 to 1.9 feet into the subsoil from the base of the plow zone.

Two parallel fencelines were located 50 feet west of the foundation. The shorter of the two, Fenceline A, extended north from S2E67 approximately 37 feet to N35E64 and consisted of thirteen post hole and mold features (Figure 10; Plate 15). Ten of these posts (Features 25, 27, 29, 31, 35, 117, 116, 115, 114, and 92) were square post holes that contained circular post molds. Only two posts (Features 24 and 66) were shallow circular features. Depths ranged from 0.5' to 1.6' (Table 9). Artifacts excavated from the post hole features of this fenceline included bottle, window, and lamp glass, wire and cut nails, and fragments of whiteware, ironstone, and redware ceramics (Appendix I).

TABLE 7

Artifacts Excavated from Feature 170 (Privy)

ARTIFACT	SOIL NO. 1	SOIL NO. 2	SOIL NO. 3	TOTAL
Glass				
Bottle	22 (2)	9 (2)	--	31 (4)
Window	183 (6)	33 (4)	--	216 (10)
Table	2 (1)	--	--	2 (1)
Jar	95	--	--	95
Mirror	10	--	--	10
Lamp	45	8 (3)	--	53 (3)
Unidentified	61 (2)	1 (2)	--	62 (4)
Nails				
Cut	12	5	--	17
Wire	5	--	--	5
Unidentified	56 (2)	6 (1)	--	62 (3)
Brick	92g (3g)	-- (1g)	--	92g (4g)
Misc. metal				
Serving handle	1	--	--	1
Scissors handle	1	--	--	1
Box lock	1	--	--	1
Tin roof	3	--	--	3
Copper fragment	1	--	--	1
Unidentified	16	24 (6)	--	40 (6)
Buckle	(1)	--	--	(1)
Other				
Button	8	--	--	8
Shell	8	--	--	8 (7)
Bone	10	--	--	10
Glass beads	2	--	--	2 (1)
Wood	(1)	--	--	
Ceramics (south #)				
81	13	--	--	13
1	1	--	--	1
2	13	2 (1)	--	15 (1)
2.3	4	3	--	7
2.5	4	1	--	5
2.9	1	--	--	1
3	1 (1)	--	--	1 (1)
20	3	--	--	3
22	7	--	--	7
84	1	--	--	1
Unidentified	--	1	--	1
Flower pot	--	--	2	2
Total	590	93	2	685 (42)
	92g			92g (4g)

(#) - Artifacts recovered from flotation sample

PLATE 17

East Profile of Feature 36 (Privy) and Feature 173

Western Fenceline B consisted of 22 post hole and mold features, extending 80 feet north from S5E63 to the northern fenceline (Figure 10; Plate 15). Features 30, 28, 72, 76, 78, 106, 205, 171, 169, 180, and 204 exhibited square post holes containing circular post molds at depths ranging from 1.0 to 2.0 feet below the top of the subsoil. Square features with no apparent post molds were Features 34, 51, 67, and 111, and were 0.9 to 1.7 feet deep. Features 68, 96, 102, 103, 110, 172, and 178 ranged from 0.8 to 1.3 feet in depth and were rectangular, oval, and circular. The fenceline made a five foot dogleg around the Feature 170 (Privy) at post Feature 169. Perhaps Feature 169 and Feature 180 were gateposts. Artifacts excavated from the post hole features of this fenceline included bone, cut and unidentifiable nails, bottle, window, lamp, jar, and table glass, and fragments of whiteware, bone china, redware, and pearlware ceramics (Appendix I). Based on the presence of pearlware and cut nails, as well as the lack of wire nails, this fenceline was probably the original fenceline. Fenceline A could have been a replacement for Fenceline B, from Feature 78 to Feature 30 (Figure 10).

The northern fenceline extended from the western fenceline post, Feature 102, east 40 feet to N75E109 (Figure 10). It was comprised of nine post hole and mold features ranging from 0.5 to 1.6 feet deep (Table 9). Several of the posts of this fenceline were circular posts with circular molds (Features 70, 135 and 94). Features 71 and 185 were possible post support posts.

FIGURE 19
Plan View and Profiles of Feature 36 (Privy) and Feature 173

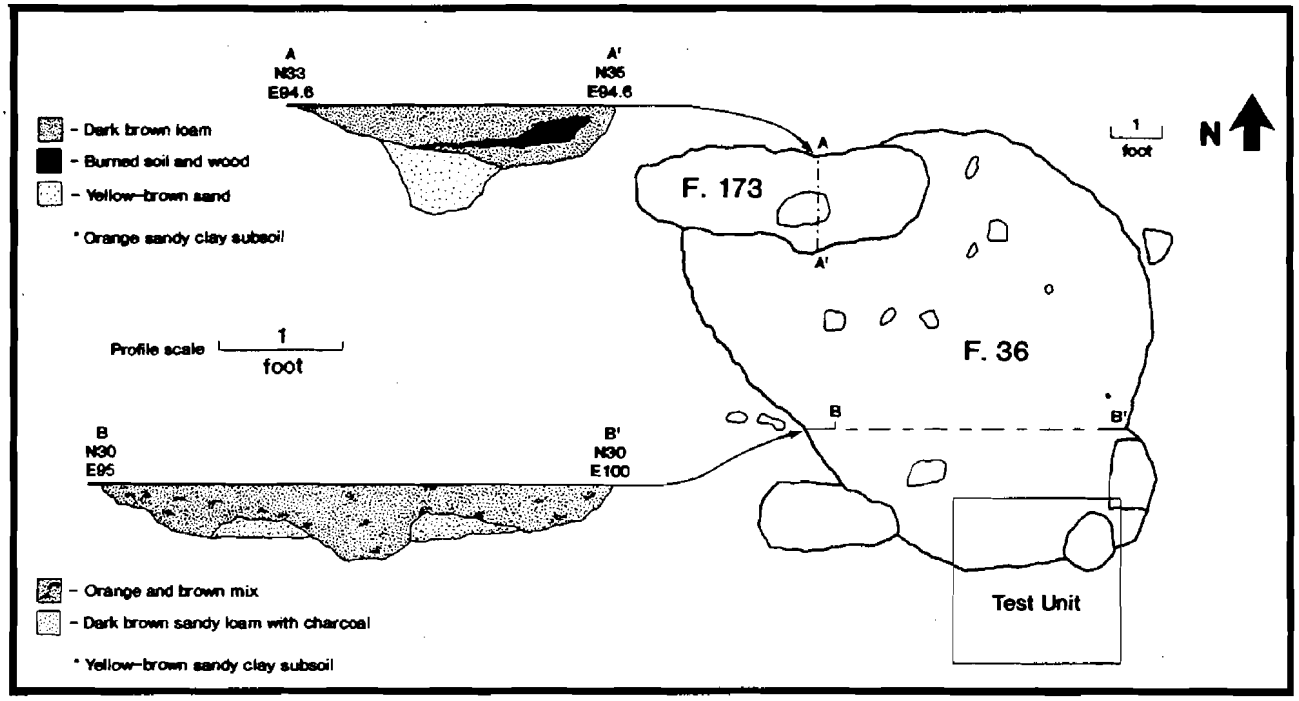


TABLE 8

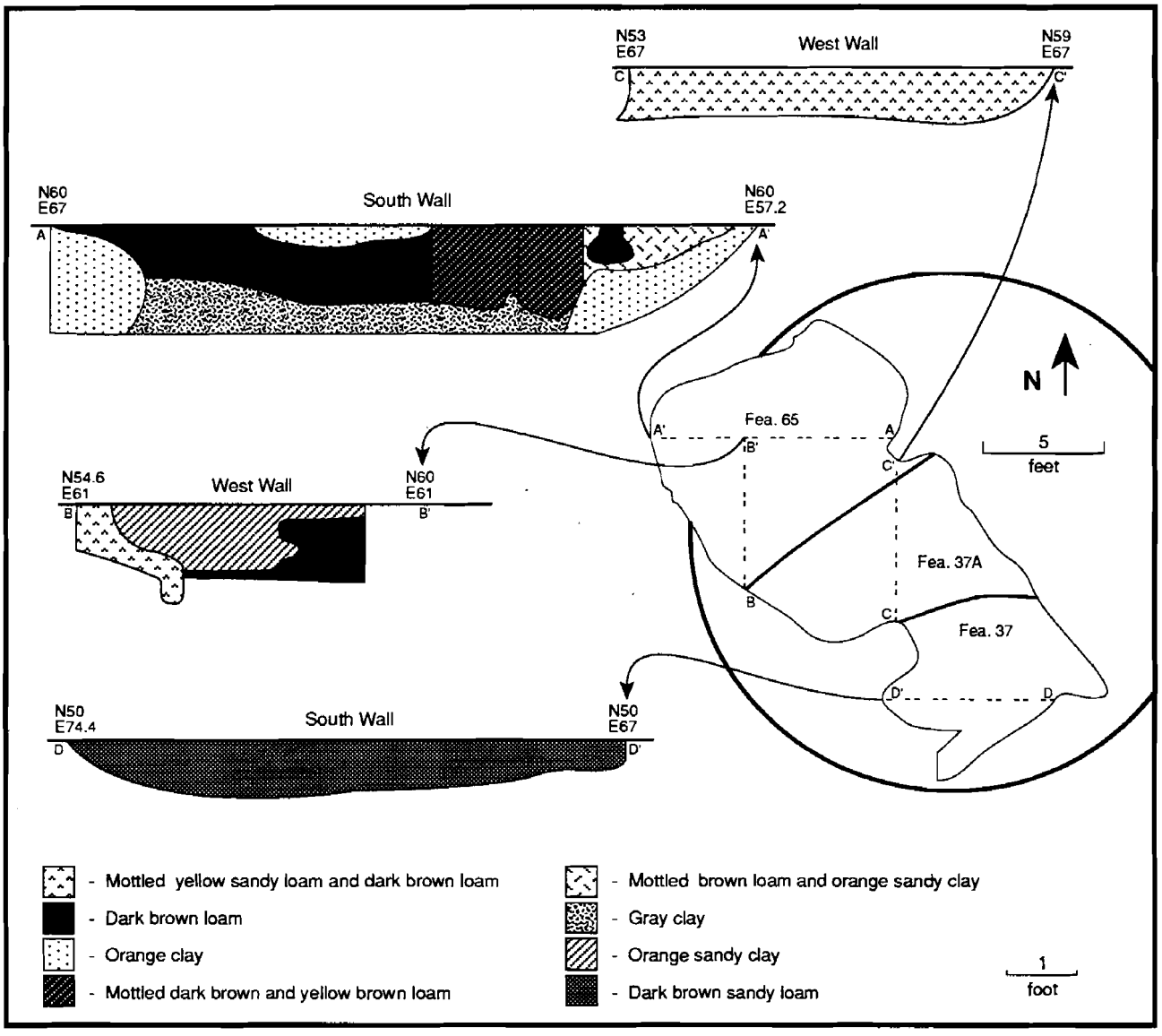
Summary of Trash Pit Features

FEA. NO.	MIDPOINT	DIMENSIONS	DEPTH	COMMENTS
39	N16 E75	2.0' diameter	0.8'	Circular
54	N37 E92.5	2.3' x 1.7'	0.5'	Rectangular
91	N77 E67.8	2.4' x 2.0'	0.3'	Circular
151	N39.3E108.4	2.6' x 1.5'	0.7'	Rectangular
153	N46 E108.2	2.4' x 2.0'	0.6'	Oval

Located between the foundation and Outbuilding I, the central north/south fenceline began at the last post feature of the southern fenceline (Feature 20) and extended north 60 feet to Feature 104 at N49E88 (Figure 10). The distance between each of the eight post features was approximately 6 feet. Post hole features containing molds included Features 45, 46, 99, and 104. Post hole features with no apparent molds were Features 15, 49, 50, 155, and 157. Depths of these features ranged from 0.6 to 1.9 feet (Table 9). Artifacts excavated from the fenceline post features included window, bottle, and lamp glass, cut and unidentifiable nails, whiteware and redware ceramic fragments.

FIGURE 20

Plan View and Profiles of Features 37, 37A and 65 (Trash Midden)



A possible shift in the alignment of the central fenceline was observed south of Feature 45. Two post hole features (69 and 89) seemed to connect Feature 45 to three very similar post hole features (79, 80, and 19). The three post features exhibited similar depths (1.3 to 1.5 feet) and were flat bottomed (Table 9). This fenceline could have also continued north to post Feature 81 and connected with the southwest corner post of the addition (Figure 10; Feature 85). Artifacts from Features 19, 69, 79, 80, 81, and 89 include window, bottle, and lamp glass, cut and unidentifiable nails, and fragments of redware, whiteware, and pearlware.

Feature 186, a square post hole and circular mold feature, was located midway between Features 79 and 193 (Figure 10). This line possibly represented a fenceline extending from the porch to the central fenceline. Feature 186

PLATE 18

West Wall Profile of Feature 65, South Half (Trash Midden)

was 1.2 feet deep and contained one fragment of ironstone, 15 cut and unidentifiable nails, 15 fragments of window, bottle, jar, and lamp glass (Appendix I).

Additional Features

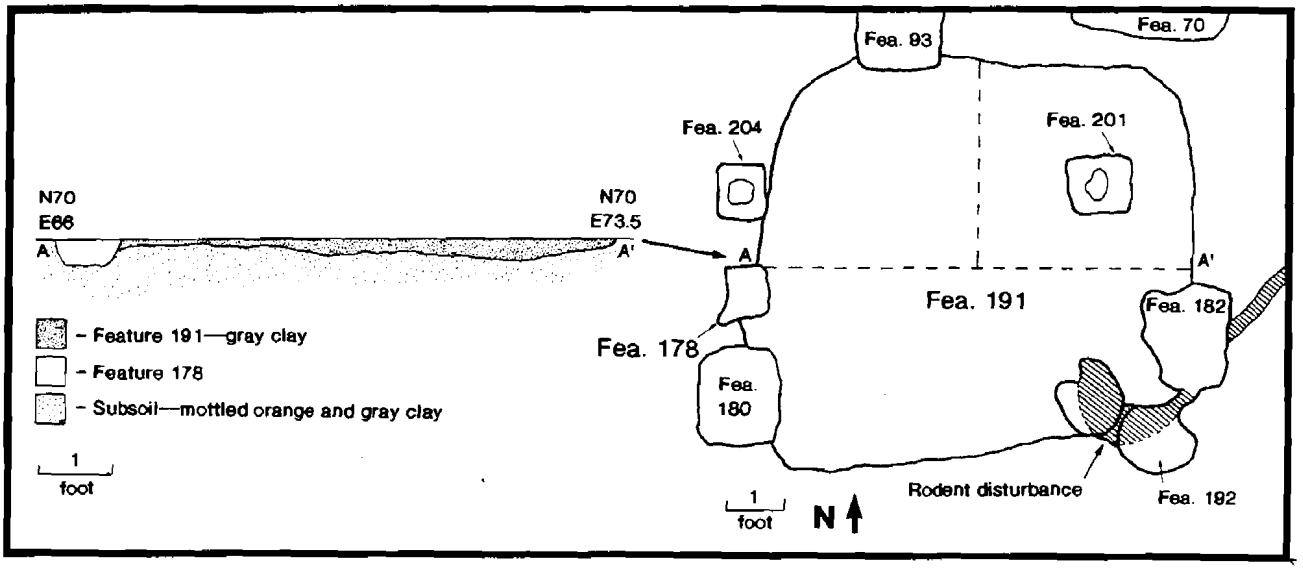
Several important additional features were found during the data recovery excavations. The first of these was at the junction of the western Fenceline B and the northern fenceline. A series of post features located five feet south of the fenceline post features (70, 202, and 135) indicated a possible enclosure (Figure 10). Features 141, 203, 182, 192, and 201 were post hole features containing circular molds that ranged in depth from 0.5 to 1.1 feet below the top of the subsoil. The above mentioned features seemed to form a 8'x 5' enclosed area. Artifacts excavated from Feature 192 included 53 total ceramics (10 redware, 35 whiteware, four yellowware, one pearlware and three ironstone), 69 molded bottle glass, 36 window glass, 70 unidentifiable glass fragments, 58 nails, 51 fragments of unidentifiable metal and one pipebowl fragment. Feature 182 contained 27 artifacts including whiteware, redware, pearlware, ironstone, bottle and window glass and a mirror fragment. Twenty-three artifacts were found in Feature 141. Features 201 and 203 contained less than 10 artifacts each (Appendix I).

TABLE 9

Summary of Fenceline Features

FEA. NO.	MIDPOINT		DIMENSIONS	DEPTH BELOW PLOW ZONE	COMMENTS
SOUTH FENCELINE					
10	S8	E111.5	1.0' diameter	0.75'	Square post mold; flat bottomed
11	S9	E111.5	1.0' diameter	1.25'	Circular; no mold
12	S9	E110.5	1.6' diameter	1.4'	Circular; no mold
6	S8.5	E108	1.0' x 1.6'	0.4'	Rectangular; no mold; flat bottomed
8	S7.5	E109	0.9' diameter	0.9'	Circular; no mold
7	S9.2	E103.1	1.0' x 1.3'	1.0'	Circular; flat bottomed
2	S8	E100.5	0.7' diameter	1.5'	Circular; no mold; flat bottomed
5	S8.4	E96.4	1.3' x 1.2'	1.9'	Square post hole; circular post mold; flat bottomed
14	S9.2	E94.7	0.9' x 0.9'	1.1'	Square post hole; circular post mold; flat bottomed
9	S8.5	E92.6	1.3' x 1.1'	0.9'	Square; no apparent mold; flat bottomed
13	S10	E87.2	1.2'diameter	1.1'	Circular; no mold; flat bottomed
23	S10	E85.5	1.1' x 1.2'	0.9'	Square post hole; circular post mold; pointed bottom
20	S9	E83.3	1.2' x 0.8'	0.9'	Square post hole; 2 circular post molds; flat bottomed
WEST FENCELINE A					
24	S2.3	E67	0.5' diameter	0.6'	Circular; pointed; no mold
25	N2.4	E67.3	1.5' x 1.1'	1.4'	Square post hole; circular post mold; flat bottomed
27	N7.3	E66	0.7' x 0.6'	0.8'	Square post hole; circular post mold; flat bottomed
29	N9.8	E66.6	1.0' x 0.7'	0.6'	Square post hole; no apparent mold; flat bottomed
21	N0	E107.5	1.4' x 1.2'	1.2'	Post hole and post mold
31	N10.6	E66.2	0.8' x 0.6'	0.7'	Square post hole; circular post mold; flat bottomed
35	N16.3	E65.8	1.0' x 1.0'	1.6'	Square post hole and post mold; flat bottomed
66	N19.3	E66.3	0.5' diameter	0.5'	Circular; shallow; no apparent mold
117	N24.4	E65.3	0.8' x 0.8'	0.5'	Square post hole; circular post mold; flat bottomed
116	N25.1	E64	0.8' x 0.8'	0.6'	Square post hole; circular post mold; flat bottomed
115	N26.7	E64.9	0.8' x 0.8'	0.7'	Square post hole; circular post mold; flat bottomed
114	N27.5	E65.1	0.8' x 1.0'	1.2'	Square post hole and post mold; flat bottomed
92	N36	E63.9	1.4' x 0.9'	1.3'	Square post hole; circular post mold; flat bottomed
WEST FENCELINE B					
30	N53.9	E63.4	1.9' x 1.4'	2.0'	Square post hole; circular post mold; flat bottomed
28	N3.8	E62.7	2.3' x 2.0'	1.6'	Square post hole and post mold; flat bottomed
51	N11.5	E62.5	1.0' x 1.0'	1.4'	Square post hole; no mold; flat bottomed
34	N13.5	E62.4	1.1' x 1.0'	1.4'	Square post hole; no mold; rounded bottom
67	N18.3	E62.5	2.0' x 1.5'	1.7'	Square post hole & square replacement; flat bottomed
68	N22	E62.5	1.0' diameter	0.8'	Rectangular; no mold; rounded bottom
72	N25.5	E62.5	1.4' x 1.6'	1.3'	Square post hole; circular post mold; flat bottomed
111	N27.3	E62.7	1.0' x 0.9'	0.9'	Square post hole; no mold; flat bottomed
110	N29	E61.9	0.9' x 0.6'	1.1'	Oval post hole; no mold; flat bottomed
76	N33.2	E62.2	1.2' x 1.4'	1.1'	Square post hole; circular post mold; flat bottomed
78	N35.5	E62	1.4' x 1.2'	1.4'	Square post hole; circular post mold; flat bottomed
96	N41	E61.7	1.3' x 0.9'	1.3'	Oval post hole; no mold; flat bottomed
103	N42.2	E58.5	0.7' diameter	1.2'	Circular post hole; no mold; flat bottomed
106	N43	E62.4	1.4' x 0.9'	1.2'	Square post hole; circular post mold; flat bottomed
205	N49.7	E61.8	1.8' x 1.1'	1.2'	Oval post hole; 2 circular post molds; flat bottomed
171	N68.8	E61.5	1.2' x 1.2'	1.3'	Square post hole; circular post mold
NORTH FENCELINE					
102	N75.4	E66.5	1.3' diameter	0.9'	Circualr post hole
93	N74.4	E68.7	1.6' x 1.2'	1.6'	Rectangular post hole; no apparent mold; flat bottomed
185	N74.7	E71.6	1.0' x 0.7'	0.5'	Rectangular post hole; support
70	N74.4	E72.9	1.2' x 1.5'	1.4'	Circular post hole & mold; driven post?
71	N76	E73.5	1.4' x 1.4'	0.5'	Square post support; flat bottomed
202	N74.3	E76	1.2' x 1.8'	1.6'	Oval post hole; square post mold; flat bottomed
135	N75.5	E80	2.6' x 2.0'	1.1'	Circular post hole & replacement post; flat bottomed
147	N74.8	E88.3	1.5' x 1.6'	0.7'	Circular post hole; no mold; flat bottomed
77	N75.2	E101.4	0.6' diameter	1.2'	Circular post hole; no apparent mold; flat bottomed
94	N75.2	E108.8	1.4' x 1.5'	1.5'	Circular post hole & post mold; flat bottomed
CENTRAL NORTH / SOUTH FENCELINE					
15	N0.8	E83.3	1.0' x 0.8'	0.6'	Square post hole; no apparent mold; flat bottomed
50	N6.5	E84	0.8' diameter	0.6'	Circular post hole; no apparent mold; flat bottomed
49	N10	E83.5	1.3' diameter	1.9'	Circular post hole; no apparent mold
46	N17	E87	0.7' x 0.9'	0.7'	Oval post hole and post mold; flat bottomed
45	N17	E90	0.8' diameter	0.7'	Oval post hole; square post mold; flat bottomed
99	N23.7	E91	1.2' x 0.8'	1.1'	Square post hole & post mold; flat bottomed
155	N35.5	E90	0.7' x 0.7'	0.5'	Square post hole; no apparent mold; flat bottomed
157	N42.6	E99.6	0.7' diameter	1.9'	Circular post hole; driven; pointed bottom
104	N49	E89	1.7' x 1.1'	1.5'	Square post hole; circular post mold; flat bottomed
CENTRAL FENCELINE (FRAGMENTARY)					
19	N1.3	E101.3	1.4' x 0.7'	1.5'	Rectangular post hole; flat bottomed
80	N5.4	E100.2	0.8' x 0.5'	1.5'	Oval post hole; flat bottomed
79	N9	E100.2	0.7' diameter	1.3'	Circular post hole; flat bottomed

FIGURE 21
Plan View and Profile of Feature 191



Feature 191, a large, shallow gray clay stain measuring 7'x 6.5', was located between the western Fenceline B dogleg and the western edge of the above mentioned enclosed area (Figures 10 and 21). It was only 0.2 feet deep and contained two nails, 10 grams of brick, and three whiteware and two pearlware ceramic fragments (Figure 21: Plate 15; Appendix I). The posts (Features 180, 178, 204, 93, 70, 201, 182, and 192) surrounding the soil stain seemed to form an 8'x 5' rectangular enclosure, not unlike the enclosure described above. Together the post features measured 14' x 5' and represented a possible animal pen, covered wood pile, or even a shed of some type.

Feature 38 was a large amorphous medium brown stain located at N67E56, west of the Feature 170 (Privy; Plate 15). It measured six feet north/south and eight feet east/west and was 0.7 feet deep. One hundred and ninety artifacts were excavated including 38 glass fragments, 69 nails, two teeth, one slate pencil, two pipe stems and 63 ceramic fragments (ironstone, redware, whiteware, pearlware and yellowware). This feature could have been the remains of the walnut tree present during Mr. Biddle's occupation, but has since either decayed or was destroyed (Figure 9).

Thirty-two isolated fenceposts were excavated during the data recovery investigation (Features 3, 4, 17, 18, 21, 22, 26, 40, 42, 44, 58, 82, 83, 84, 97, 113, 118, 119, 127, 134, 142, 143, 146, 166, 167, 179, 184, 188, 189, 196, 197, and 198; Figure 10). Each of these were not associated with any obvious structures or other features. The depths, mid-point grid locations dimensions, and comments for each feature is listed in Appendix V. Realignments of fences over time or possible clothes line posts could account for the presence of these scattered or random fencepost features.

The area northwest of Feature 170 was devoid of post hole or structural features. Only seven features were excavated in this area (Features 128, 120, 107, 108, 164, and 163; Figure 10; Plate 15). Features 163 and 164 were large irregular shaped light brown loam stains flecked with charcoal throughout and contained no cultural material. The soil stains were probably remnants of burned trees/stumps. Features 68, 107, 108, 112, and 120 were small circular features with pointed, tapered profiles containing little or no cultural material. Features 107 and 120 were flecked with charcoal. This area was known historically as the location of the Stevenson's garden.

Other cultural features were located within the boundaries of the fencelines (northern, southern, and western Fenceline B). Features 148 and 149, located along the northern fenceline, were similar to the above mentioned plant/root features (Figure 10; Appendix V). Features 101, 105, 158, 161, and 187, located north of the foundation and Outbuilding 1, contained small amounts of artifacts, and had irregular and/or tapered shapes (Figure 10). Features 154

TABLE 10

Artifacts Excavated from Subsoil Units

N0 E120 UNIT J	N2 E112 UNIT I	N60 E125 UNIT K	N70 E110 UNIT L	N80 E105 UNIT M	N90 E95 UNIT N
2 cut nails 3 unidentified metal 2 whiteware	1 window glass 3 unidentified glass 1 gram of brick 1 pearlware	4 unidentified glass 7 window glass 4 cut nails 8 unidentified nails 3 unidentified metal 9 whiteware 1 creamware 2 yellowware	2 window glass 4 cut nails 1 wire nail 7 unidentified nails 250 grams of brick 4 oyster shell 4 bone fragments 2 ironstone 5 whiteware 1 creamware 2 redware	1 window glass 4 unidentified glass 7 unidentified metal 210 grams of brick 3 redware	1 cut nail 2 creamware 1 pearlware

and 156 were also located north of the foundation and Outbuilding I, but were 1.5' in diameter with charcoal flecked stains extending 2.0 to 2.5 feet into the subsoil (Appendix V). These stains were possibly remnants of burned trees/ stumps.

Features 1 and 159 were located south of the cellar and Outbuilding I (Figure 10). The features were determined to be associated with plant/roots based on the lack of cultural remains and the tapered, irregular shape (Appendix V).

Feature 75, located at N4E93.5, contained 39 charred coffee beans and no other cultural material. Perhaps a hole was dug for disposal of beans that were too roasted to grind and use.

Feature 129, located southeast of the possible animal pen or shed, contained the remains of a domestic cat. Another domestic cat skeleton was excavated from Feature 152, located next to the east wall of Outbuilding I (Figure 10).

Eight non-cultural features were excavated during the Phase III investigations. Features 16, 52, 53, 90, 98, 150, 163, 164, and 206 contained either a small quantity of artifacts or no cultural material (Figure 10; Appendix I). The lack of cultural material and the irregular shape of the above mentioned features indicated that they were probably rodent disturbances.

The northeast portion of the Cazier site was slightly lower in elevation than the remainder of the site and the soil in this area was a dark, yellow-brown loam that contained artifacts. Only nine features (150, 147, 77, 94, 95, 109, 113, 101, and 206) were identified in this area (Figure 10; Plate 5). Four (5'x 5') units were excavated in this darker soil to determine the depth and extent of the soil change. The yellow clay subsoil was revealed below 0.4' of dark yellow loam excavated from Unit N (N90E95). Seven artifacts were excavated from this unit including one nail, one bone fragment, and one whiteware and two redware fragments. Unit M (N80E105) contained 15 artifacts including brick, window and unidentifiable glass, metal and redware (Table 10). The yellow clay subsoil was exposed at 0.4'. The north profile of Unit L (N70E115) revealed 0.5 feet of the dark yellow loam. Artifacts excavated from this unit included 12 cut, wire, and unidentifiable nails, two window glass, brick, bone, and fragments of ironstone, whiteware, creamware, and redware ceramics (Table 10). Unit K at N60E125 was excavated 0.5 feet before reaching the sterile yellow subsoil. The dark yellow loam contained 38 artifacts including window and unidentifiable glass, cut and unidentifiable nails, metal, whiteware, creamware and yellowware (Table 10). The artifact bearing soils of this low area probably represent years of accumulated slopewash from higher ground.

TABLE 11

Total Plow Zone Artifacts

KITCHEN 60.5%

Ceramics	
Whiteware / ironstone	11,483
Redware	1,954
Porcelain	545
Other	460
Pearlware / creamware	260
Stoneware	226
Glass	
Bottle	6,836
Jar, table, Household	1,409
Unidentified	9,179
TOTAL	32,352

ARCHITECTURAL 30.3%

Window glass	8,028
Cut nails	2,471
Wire nails	141
Unidentified nails, screws, & staples	5,546
TOTAL	16,186

MISCELLANEOUS METAL 8.1%

TOTAL	4,339

FLORAL & FAUNAL 0.4%

Bone	102
Shell	128
Nut	1
TOTAL	231

PERSONAL 0.3%

Toys	63
Slate pencils	6
Pipe fragments	59
Coins	13
TOTAL	141

CLOTHING 0.2%

Buttons	76
Jewelry	4
TOTAL	80

TOTAL ARTIFACTS (minus brick): 53,433

TOTAL BRICK WEIGHT: 40,969 grams

Another area of darker yellow subsoil was observed south of the foundation and porch support posts. No definite limits were apparent, but the dark soil seemed to be present east of Features 21 and 142, but was not present to the west of these features. The darker soil continued east to the disturbed roadside ditch, and south to approximately S5 of the site grid. Two units (I and J) were excavated in this area to determine the depth and extent of soil differentiation (Figure 10; Plate 6). Unit I (N2E112) was placed along the western edge of Feature 142. The lighter yellow clay sterile subsoil was exposed after excavating 0.1 feet of dark yellow loam on the west half and 0.3 feet on the east half. Six artifacts excavated from this unit included window and unidentifiable glass, brick, and transfer-printed pearlware (Table 10). Unit J (N0E120) was also shallow (0.2 feet) and contained few artifacts including cut and unidentifiable nails, metal, and whiteware (Table 10). The absence of features in this area, as well as slightly deeper disturbed soils could indicate front yard activities.

ARTIFACT ANALYSIS

Artifacts excavated from the Cazier site were separated into two contexts — those found in the plow zone and those found in features. Total artifacts from each Phase III (5'x 5') test unit were compiled separately, then all unit artifacts were totaled together for a Phase III plow zone artifact total (Table 11). Because the Phase II (3'x 3') unit artifact totals were incorporated into the plow zone artifact distribution random sample procedure, the totals from the Phase II (3'x 3') test units were added to the total artifact counts from the plow zone (Appendix I). Artifacts found during surface collections were not included in the plow zone artifact total, but were listed separately in Appendix I. Feature artifacts were totaled by feature, and a Mean Ceramic Date was computed for each feature (Appendix I). A total of all the artifacts found in the feature excavations was then compiled and is presented in Table 12.

TABLE 12

Total Feature Artifacts

KITCHEN 33.7%	
Ceramics	
Whiteware	855
Ironstone	181
Redware	172
Bone china	48
Pearlware	35
Yellowware	19
Porcelain	18
Stoneware	17
Rockingham	9
Creamware	15
Slipware	1
Flowerpot	3
Unidentified	35
Glass	
Bottle & jar	840
Table	48
Household	476
Unidentified	867
TOTAL	3,639
ARCHITECTURAL 36.9%	
Window glass	1,324
Nails & screws	2,313
Mortar, plaster, & slag	350
Brick (13,299 grams)	
TOTAL	3,987
TOTAL ARTIFACTS: 10,812	

MISCELLANEOUS 18.2%	
Unidentified & miscellaneous metal	1,936
Unidentifiable	12
Plastic	1
Coal & coal ash	14
TOTAL	1,963
FLORAL & FAUNAL 9.4%	
Bone and teeth	952
Shell	42
Wood	24
Nut	1
TOTAL	1,019
CLOTHING 1.4%	
Butons	117
Textiles & jewelry	36
TOTAL	153
PERSONAL 0.5%	
Toys	9
Slate pencils	20
Pipe fragments	20
Coins	2
TOTAL	51

Seventy-one prehistoric artifacts were excavated from the plow zone sample units during the Phase III investigations of the Cazier site. These artifacts included 66 fire-cracked rock (11,629 grams), one quartzite flake, one quartz flake, one jasper flake with cortex, one quartzite flake tool, and one ironstone contracting stemmed point dating to the Woodland I Period. Since all of the prehistoric artifacts were recovered from disturbed contexts, they will not be discussed further in this report.

A total of 53,433 historical artifacts were recovered from the Phase II and Phase III excavations of the plow zone at the Cazier site. Artifacts found during surface collections and after the mechanical removal of the plow zone totaled 691. Two hundred and eight features produced 10,812 total artifacts.

KITCHEN ARTIFACT GROUP

Of the total number of artifacts recovered from the plow zone, 60.5 percent were kitchen related artifacts (Table 11). Over half (53.9 percent) of this group was comprised of bottle, jar, table, household, and unidentifiable glass. Ceramics represented 46.1 percent of the kitchen group. Ceramics dating from the second half of the nineteenth century to the early twentieth century, such as whiteware, ironstone, yellowware, and Rockingham, represented 76.9 percent of all ceramics found in the plow zone. Only 1.7 percent (260 fragments) were pearlwares and creamwares,

TABLE 13

Minimum Ceramic Vessel Counts

VESSEL TYPE	# OF VESSELS	FLAT	HOLLOW	CUP	MUG / JUG
Redware	18		18		
Whiteware	70	24	44	7	1
Ironstone	11	2	8		1
Bone china	9	4	5	2	1
American porcelain	1	1			
Pearlware	3	1	1		
Rockingham	2		2		
Brown stoneware	2		2		
Yellowware	2		2		
Creamware	1		3	1	
Unidentified	5	1			
TOTAL	124	33	85	10	3

dating from the late eighteenth to the mid-nineteenth century. Other ceramic groups represented included 226 stonewares (1.5 percent), 545 (3.7 percent) porcelain fragments and 460 miscellaneous refined earthenwares (3.1 percent). Redware comprised 13.1 percent of all ceramics excavated from the plow zone.

Of the total number of artifacts recovered from the features, 33.7 percent were kitchen related artifacts, over half (61.3 percent) were glass fragments (Table 12). Over 60 percent of the ceramics were whiteware. Only 50 fragments of pearlware and creamware were excavated from features. Thirteen percent of the ceramic artifacts were ironstone. Redware comprised 12 percent of the ceramic total. Other ceramics excavated from features included American porcelain, stoneware, Rockingham, bone china, and terra cotta flower pot fragments (Appendix I).

A total of 124 ceramic vessels were reconstructed from the fragments recovered from the features (Table 13). Seventy of these vessels were whiteware, including annular, gild-edged, blue shell-edged, hand painted polychrome, sponge decorated, blue, black and green transfer printed, flow blue, and decal decorated designs. Over half of the whiteware vessels were hollow forms, either bowls or cups (Table 13). Eighteen redware vessels were reconstructed, all were hollow forms. Ironstone vessels totaled eleven and bone china totaled nine. The remaining vessels were American porcelain, pearlware (one transfer-printed, one hand painted polychrome and one annular ware), Rockingham, brown stoneware, yellowware, creamware, and unidentified (Table 13).

Forty-two (33.9 percent) of the vessels were classified as dining (tableware) related items (Table 14). Tea and coffee wares comprised 16.1 percent of the ceramic vessels. Other drinking related items (mugs and goblets) totaled 3.2 percent. The food preparation, storage, and storage/dining function categories combined totaled 22 vessels. Other vessel function categories were medicinal (four vessels), decorative (two vessels), one condiment container, and one toy. Twenty-eight of the minimum ceramic vessels reconstructed from the features were unidentifiable (Table 14).

TABLE 14

Vessel Functions of Minimum Ceramic Vessels

FUNCTION	Number	PERCENTAGE
Dining (tableware)	42	33.9%
Tea and coffee wares	20	16.1%
Drinking (mugs and goblets)	4	3.2%
Food preparation	5	4.1%
Food storage	5	4.1%
Medicinal	4	3.2%
Decorative	2	1.6%
Food storage or dining	9	7.2%
Condiments	1	0.8%
Food storage or food preparation	3	2.4%
Toys	1	0.8%
Unidentifiable	28	22.6%
TOTAL	124	100.0%

TABLE 15

Minimum Ceramic Vessel Types from Feature 32

WHITEWARE	IRONSTONE	AMERICAN PORCELAIN	REDWARE
2 Hollow unknown	1 Saucer	1 Saucer	1 Food storage
1 Flat unknown	1 Cup		1 Food preparation
1 Unknown decorative	1 Mug / jug		
1 Vase	1 Bowl	BONE CHINA	OTHER
2 Platters	1 Tureen		
2 Teapots	1 Pitcher (washroom)	1 Cup	2 Unknown
5 Plates	1 Chamberpot	1 Mug / jug	1 Rockingham condiment
2 Saucers	1 Unknown	1 Plate	1 Bowl
1 Bowl, food prep.		1 Tureen	
6 Bowls, dining			
1 Food storage or dining		44 minimum ceramic vessels from Feature 32	
1 Cup		MCD = 1873.8 excluding redware	

TABLE 16

Minimum Ceramic Vessel Types from Features 37, 37A, and 65 (Trash Midden) and from Feature 170 (Privy)

Features 37, 37A, and 65

REDWARE	WHITEWARE	AMERICAN BLUE & GRAY STONEWARE	BONE CHINA
2 Food preparation	1 Mug		1 Plate
1 Food storage	3 Plates	1 Food storage	
1 Food prep. or storage	3 Saucers		
1 Food stor. or dining	1 Cup	BROWN STONEWARE	PEARLWARE
1 Unidentified	1 Bowl		
	7 Unidentified	1 Food storage	1 Plate

IRONSTONE	ROCKINGHAM	TERRA COTTA
1 Hollow	1 Hollow	1 Flowerpot
1 Plate		

Feature 170

REDWARE	WHITEWARE	UNIDENTIFIED	IRONSTONE
1 Hollow	1 Jug	1 Hollow	1 Mug
1 Chamberpot	1 Mug		
	2 Bowls		
	2 Plates		

MCD - 1838.9

Several of the above mentioned vessel function categories were used in a more specific vessel function analysis and will be discussed in more detail in the inter-site analyses section of this report.

Three features contained over half of the reconstructed vessels. The foundation (Feature 32) contributed 44 vessels, and 30 vessels were reconstructed from the trash midden (Features 37, 37A, and 65) and ten vessels were recovered from the nineteenth century privy (Feature 170). Vessel forms, decoration/ware, and functions are listed by feature in Tables 15 and 16.

The mean ceramic date for the vessels found in Feature 32 was 1873.8, excluding redware. Three vessels recovered from the cellar fill (Feature 32) had maker's marks. One vessel, a reconstructed ironstone tureen (Vessel 44; Plate 19) had a makers mark of the Royal Arm Imperial Ironstone China Baker and Chetwynd 1872 on its base. Vessel 72, fragments of a whiteware vase, had a makers mark from Buffalo Pottery, dating between 1907 and 1940 (Plate 20-3). A whiteware platter with a makers mark from the Keystone Chester Pottery, dating between 1894 and 1897, was also excavated from the unprovenienced cellar fill (Vessel 21; Plate 21-3). Other vessels from the cellar fill are depicted in Plates 20 and 21.

PLATE 19

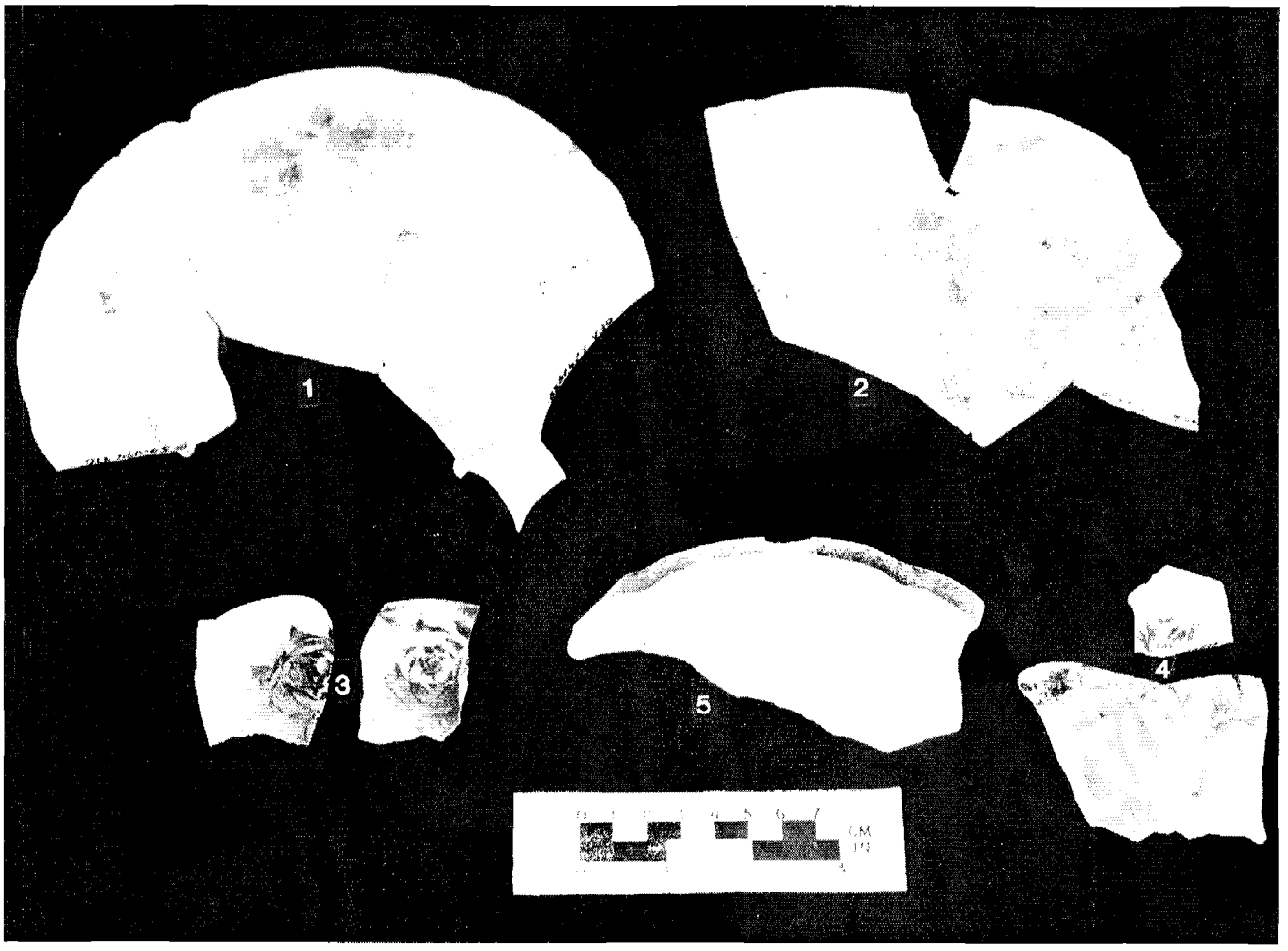
Ironstone Tureen Excavated from Feature 32 (Cellar Fill)

A total of 176 minimum glass vessels were recovered from the features (Table 17). Thirty two percent of the vessels were unidentifiable, but the remaining vessels were assigned specific vessel functions/types (Table 17). The largest percentage (20.5%) of known glass vessel functions was the food container group, including 32 condiment bottles and four preserves/storage bottles. Twenty-eight (15.9%) beverage bottles were reconstructed including 18 alcohol and 10 non-alcohol bottles. The medicinal/chemical category consisted of 25 bottles or 14.2 percent. Eight drinking vessels (4.6%) and six tableware vessels (3.4%) were identified. The remainder of the glass vessel functions included three decorative vessels, eight lighting vessels (lamp glass), two personal vessels (ink well and perfume bottle), and three miscellaneous items (mirrors). Table 18 shows the minimum glass vessels from Feature 32 (cellar). Eighty-two of the 141 minimum glass vessels collected from Feature 32 were complete bottles, flasks, jars, and salt/pepper shakers. Seventy-six of the complete bottles provided manufacturing dates—one bottle made between 1880-1900, six made between 1870-1920, 65 were produced from 1902+ and four were made from 1923+. Plate 22 and Table 19 depict and describe representative bottles excavated from the cellar fill, the corresponding bottle numbers, the feature where they were found, and their dimensions.

The trash midden (Features 37, 37A, and 65) contained 12 glass vessels including one blown glass bottle dating to the late 1800s (Table 20). Only one minimum glass vessel, a medicine bottle manufactured in the 1850-1860s, was excavated from the privy (Feature 170; Table 20; Plate 23:6).

PLATE 20

Rose Decal Vessels Excavated from Feature 32 (Cellar Fill)



1: Bone china plate. 2: Whiteware platter. 3: Whiteware vase 1907-1940. 4: Whiteware decorative bowl. 5: Whiteware plate.

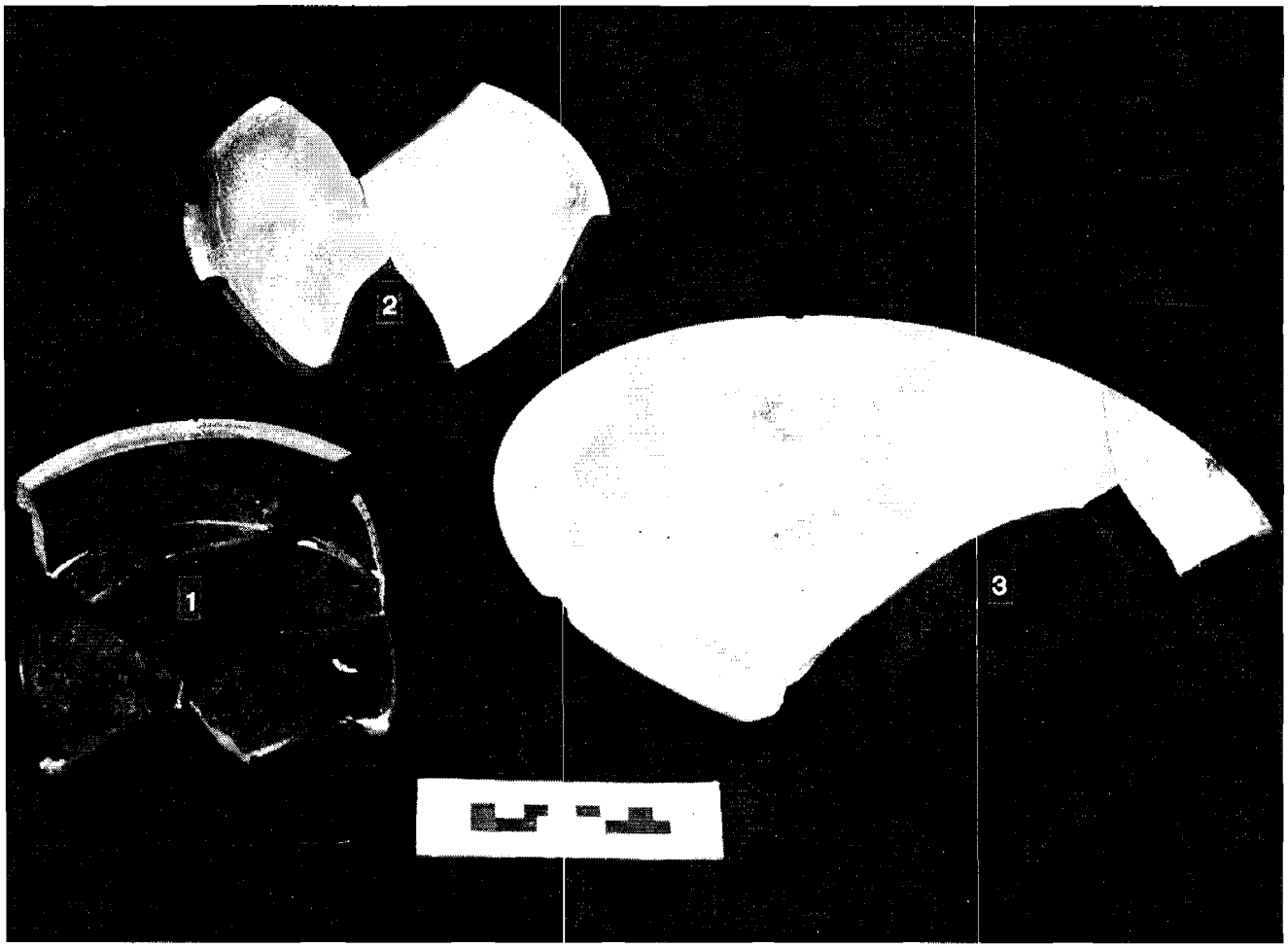
A total of 43 tin cans were excavated from Level 4 and Level 5 of Unit E in the southwest corner of the cellar (Feature 32). None of the cans exhibited signs of soldered seams and all had folded interior side seams, a typical manufacturing technique post 1920. Sixteen cans were identifiable, including 12 kitchen related (condensed milk, green bean, and coffee cans).

ARCHITECTURAL ARTIFACT GROUP

Thirty percent of all the artifacts excavated from the plow zone were architecturally-related (Table 11). Over half were nails, staples, and screws. A total of 2,471 cut nails, 141 wire nails, and 5,546 unidentifiable nails, screws, and staples were recovered. The large number of cut nails suggested a house construction date prior to the 1870s-1880s. Window glass fragments totaled 8,028. Brick fragments recovered from the plow zone units were weighed rather than counted, and a brick weight was used for distribution analysis. The fragmentary nature of brick tends to give an

PLATE 21

Stoneware Baking Dish, Redware Bowl and Whiteware Platter Excavated from Feature 32 (Cellar Fill)



1: Stoneware baking dish. 2: Redware food preparation bowl with white slip interior. 3: Whiteware platter, Keystone Chester Pottery maker's mark 1894-1897.

exaggerated total count when found in a plow zone context. A control brick was recovered and weighed 2,025 grams. Total brick weight of all brick found in the plow zone sample units was 40,969 grams. Using this method, a total of at least 20 bricks were found in the plow zone.

The largest class of artifacts excavated from the features was architectural, even excluding the brick (Table 12). Over half of the architectural artifacts (58 percent) were nails, screws, and staples. Window glass comprised 33.2 percent of the architectural group. Three architecturally related cans were identified including two paint cans and one paint bucket. Three hundred and fifty fragments of mortar and plaster were recovered from the features. Twenty-nine of the larger fragments were ground into powder and underwent mortar analysis testing, and the results will be presented later in this report.

TABLE 17

Vessel Functions of Minimum Glass Vessels

FUNCTION	Number	PERCENTAGE
Alcoholic beverage	18	10.2%
Nonalcoholic beverage	10	5.7%
Medicinal	23	13.1%
Condiments	32	18.2%
Chemical	2	1.1%
Drinking		
Tumbler	6	3.4%
Stemmed	1	0.6%
Mug / other	1	0.6%
Other table		
Dining	1	0.6%
Serving	5	2.8%
Decorative	3	1.7%
Lighting	8	4.5%
Personal	2	1.1%
Mirror	3	1.7%
Preserves / storage	4	2.3%
Unidentifiable	57	32.4%
TOTAL	176	100%

TOBACCO ARTIFACT GROUP

Fifty-nine kaolin clay pipe stem and bowl fragments were recovered from the plow zone (Table 11). The majority of these were undecorated. Twenty kaolin clay pipe stem and bowl fragments were excavated from the features (Table 12). A makers mark on one of the molded bowls was partially legible—DOUGLA...GLASGOW. One tobacco can was recovered from the cellar fill (Feature 32).

COINS

Nine U.S. coins were excavated from the plow zone sample units (Table 21). The coins found dated from 1857 to 1918. Eight coins were cents and one coin was a 1918 U.S. half dollar, the largest denomination found. Five U.S. coins were found during feature excavation (Table 21). Two Indian Head cents, 1863 and 1864, were recovered from Level 5 of Unit E in the northwest corner of the cellar (Feature 32; Figure 11). One 1914 Wheat cent was excavated from Unit B Level 2, located along the north wall of the cellar (Figure 11). An 1882 Indian Head cent was found in the disturbed cellar floor of Unit D in southeast corner of Feature 32 (Figure 11). A partially obscured 1865 or 1866 Indian Head cent was found in the post hole fill of Feature 195 (a porch support post south of Unit D; Figure 11).

ACTIVITIES GROUP

Eight percent of the total artifacts found in the plow zone were miscellaneous metals, such as tools, tin cans, plow parts, and unidentifiable objects (Table 11). A larger percentage (18.2) of this group of artifacts was recovered from the features, due to the vast amount of fill excavated from the cellar (Feature 32; Table 12, Appendix I).

TABLE 18

Minimum Glass Vessels from Feature 32 (Cellar)

BOTTLES (61 total)	JARS (42 total)	TUMBLERS (6 total)
16 Alcoholic beverage (flasks)	9 Vaseline	CUPS (1 total)
9 Nonalcoholic beverage (soda)	3 Condiment	
7 Medicinal (vials)	4 Preserves / storage	LAMP GLOBES (7 total)
16 Condiment	26 Unidentifiable	
1 Chemical		UNIDENTIFIED (4 total)
2 Personal		
10 Unidentifiable	TABLE (14 total)	DECORATIVE
	1 Dining	1 Chandelier
*141 total vessels	13 Serving (cruet / decanter)	
		CONDIMENTS
		5 Salt / pepper shakers

CLOTHING AND PERSONAL GROUP

Seventy-six metal, plastic, shell, bone, and wooden buttons, four glass and plastic beads, six slate pencils and 63 toys were excavated from the plow zone (Table 11). Sixty of the toys found consisted of porcelain doll parts and tea set fragments of bone china and Littler's Blue porcelain. Two clay marbles and one steering wheel were also recovered from the plow zone. The features produced 117 buttons, two glass beads, fragments of leather and gum soles, 20 slate pencils, and nine toys (one glass marble and eight porcelain doll and tea set fragments; Table 12).

FLORAL AND FAUNAL REMAINS

This group represented only 0.4 percent of all artifacts excavated from the plow zone (Table 11). One hundred and two fragments of bone and 128 fragments of oyster and clam shell were recovered. A higher percentage (9.4) was recovered from the features (Table 12). Twenty-four pieces of wood, 42 fragments of oyster and clam shell, and 952 bone fragments were recovered. Two flotation samples taken from the privy (Feature 170) soils revealed wild grape, raspberry, pigweed (amaranth), grass and dock (rumex crispus) seeds in the light fraction. Thirty-nine charred coffee beans were discovered in Feature 75 (Figure 10).

Of the 952 bone and teeth fragments excavated from the features, 654 were chosen for faunal analysis based on each fragment's preservation and potential for identification (Table 22). One hundred and twenty-three (18.8 percent) could only be identified as unidentifiable mammal. Ninety-six bird bones were identified, exact speciation was not possible. The minimum number of individuals (MNI) identified totaled 17, and included a wide variety of species. Domestic species were represented by two cows (Bos taurus), two pigs (Sus scrofa), one sheep (Ovis aries), and two near complete cats (Felis domesticus). Wild varieties were also identified, including one Canada goose (Banta

PLATE 22

Representative Bottles Excavated from Feature 32 (Cellar) and Feature 175 (Bulkhead)--(see Table 19)

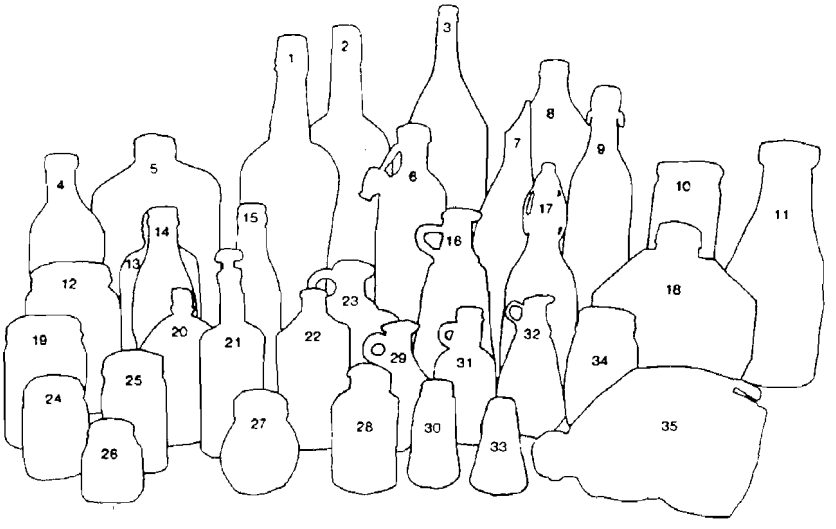


TABLE 19

Representative Bottles from Feature 32 (Cellar), Feature 175 (Bulkhead), and Feature 170 (Privy)

	PHOTO LOCATION	BOTTLE NO.	FEATURE NO.	MANUFACTURE	DIMENSIONS & DESCRIPTION WIDTH	LENGTH	HEIGHT	COLOR	DATE	COMMENTS
PLATE 22	1	B56	32	FA	3 1/2		10 7/8	Clear	1902+	One quart on shoulder
	2	B57	32	FA	3 1/2		11	Clear	1902+	Capacity one full quart
	3	B51	32	FA	3 1/2		12	Green	1902+	ASCD, full quart
	4	B53	32	FA	2 3/4		8 1/2	Clear	1902+	Fluted bottle
	5	B6	32	FA	2 1/2	5	9	Clear	1902+	Mottled abstract pattern
	6	B59	32	FA	2		7 5/8	Clear	1902-1920	Citrate of magnesia
	7	B18	32D	Turn / paste	3		9	Olive	1880-1920	Bottle w/ improved pontil
	8	B27	32	FA	3 3/4		9 1/2	Clear	1902+	Fluted one quart bottle
	9	B58	32	2 piece w/ cup bottom	2 1/2		9 1/4	Aqua	1870-1920	Registered: Albert Keintz 7173 Palisade Ave. Englewood, NJ
	10	B79	32E--L.4	FA	2 1/2		8 1/2	Clear	1902+	Jar
	11	B50	32	FA	3		9 1/2	Clear	1902+	Cloverland farm dairy
	12	B22	32B	FA	3 1/4		5	Clear	1902+	Screw top jar
	13	B8	32	FA	1 1/2	3	6 1/2		1902+	Flask
	14	B25	32	FA	2		8	Green	1923-1937	Coca cola Wilmington, DE Dec. 25, 1923
	15	B4	32	FA	2		7 1/2	Clear	1920-1960	Orange Crush Co. 6 oz., pat.d July 20, 1920
	16	B63	32	FA	3		7 1/2	Clear	1902	Hexagonal cruet
	17	B3	32	FA	2 1/2		8	Clear	1900	Citrate magnesia, porcelain stopper
	18	B80	32E--L.4	FA	2 1/2	5 3/4	7	Clear	1902+	Octagonal bottle
	19	B46	32	FA	2 1/2		4 1/4	Clear	1902+	Screw top jar
	20	B71	32	FA	1	1 3/4	5 1/4	Clear	1902+	Pocked sides, smooth front
	21	B24	32D	2 piece w/ cup bottom	1	2	6 1/2	Aqua	1880-1900	Jackson's Magnum Bonum cough syrup
	22	B72	32	2 piece w/ cup bottom	1 1/2	2 1/2	5 3/4	Clear	1880-1920	Flask
	23	B62	32	FA	3 1/2		5 3/4	Clear	1902+	Fluted cruet
	24	B43	32	FA	2		3	Clear	1902+	Interrupted thread jar
	25	B26	175--W 1/2	FA	2		3 3/4	Amber	?	KRUSCHEN salts
	26	B30	32	FA	1 7/8		2 1/2	Clear	1902+	CHESEBROUGH vaseline jar
	27	B70	32	FA	1 1/2	2 3/4	3	Clear	?	Pocked sides, smooth front
	28	B76	32	2 piece w/ cup bottom	2 1/8		4 1/4	Aqua	1880-1920	RUMFORD on shoulder
	29	B66	32	FA	1 1/2		4 1/2	Clear	1902+	Fluted cruet
	30	B60	32	SA	1 3/4		3 1/2	Clear	1880-1905	Salt / pepper shaker
	31	B73	32	FA	1 1/2		5 1/2	Clear	1902+	Condiment
	32	B81	32E--L.4	FA	1	2 1/2	5 1/2	Clear	1902+	Condiment / cruet
	33	B67	32	FA	2		3	Clear	1902+	Salt / pepper shaker
	34	B48	32	FA	2		4 1/4	Clear	1902+	Condiment shaker
	35	B78	32	FA	7		9	Clear	1902+	Pocked exterior, smooth interior
PLATE 23	1	B58	32	2 piece w/ cup bottom	2 1/2		9 1/4	Aqua	1870-1920	Registered: Albert Keintz 7173 Palisade Ave. Englewood, NJ
	2	B18	32D	Turn / paste	3	1 1/2	9	Olive	1880-1920	Bottle w/ improved pontil
	3	B75	32	2 piece w/ cup bottom	3/4	2	4 1/2	Clear	1880-1920	--
	4	B24	32D	2 piece w/ cup bottom	1	2 1/2	6 1/2	Aqua	1880-1900	Jackson's Magnum Bonum cough syrup
	5	B72	32	2 piece w/ cup bottom	1 1/2	--	5 3/4	Clear	1880-1920	Flask
	6	B25	170	Contact molded			--	--	1923-1937	--
	7	B76	32	2 piece w/ cup bottom	2 1/8		4 1/4	Aqua	1880-1920	RUMFORD on shoulder

FA - Fully automated
SA - Semi-automated

*All measurements are in inches

TABLE 20

Minimum Glass Vessels from Features 37, 37A, 65 (Trash Midden) and 170 (Privy)

FEATURE 37, 37A, and 65 (12 total)	FEATURE 170 (1 total)
1 Medicinal bottle	1 Medicinal bottle
1 Alcoholic beverage bottle	
1 Nonalcoholic beverage bottle	
1 Bottle	
1 Tumbler	
1 Footed serving bowl	
1 Decorative bowl	
1 Salt / pepper shaker	
4 Unidentified	

canadensis), one rabbit, three rats, one squirrel, two turtles (one painted), and one opossum (Didelphis marsupialis). One unknown species of fish was recovered.

Although the assemblage was small and not likely to be an accurate reflection of the dietary patterns of the occupants at the site, several observations were made. Eighty-one percent of the identifiable bone fragments were recovered from secondarily deposited fill from Feature 32 (Cellar). These figures exclude the two near complete cat skeletons found in Features 129 and 152, as the large amount of bone distorts the bone percentages.

Eleven (68 percent) of the cow bones and six (7 percent) of the pig bones exhibited cut marks (Table 22). Due to the small number of butcher marks present of the identifiable bone, it was not possible to conduct a quantitative analysis of the cuts of meat represented by the cow, pig, and sheep bones. Bones recovered ranged from ribs, tibia, humeri and scapula. Beef cuts represented were rump, foreshank, shoulder, and some ribs. The types of pig bones identified suggest a diet of hams, hocks, joints, ribs, and shoulders.

Based on the number and type of bone recovered from the site, these animals were probably not raised on the site, except for a few chickens. Some of the chicken bones were from the feet and head, indicating possible on-site butchering. Elizabeth Stevenson Stafford indicated that all the butchering would have taken place at the farmyard of the mansion, because the smokehouses were located there, rather than at the tenant property. She also mentioned that her family probably received their meat from the Caziers.

INTRA-SITE ANALYSES AND INTERPRETATIONS

The occupation of the Cazier site from 1844 to 1935 was divided into three distinct chronological periods. The first period was the occupation of Henry Cazier's unknown tenants/gatekeepers from circa 1844 to the late nineteenth century. The second occupation was by the Nicholas Stevenson Family from circa 1880 to circa 1910. The final and shortest period of occupation was by Rudolf Stevenson and his family from the late 1920s to 1935. Combining the results of the chemical soil analysis, the plow zone artifact distributions and the mortar analysis with the archaeological and historical evidence, intra-site interpretations about diachronic and synchronic changes at the Cazier site can be determined and are presented in the following pages.

PLATE 23

Semi-Automated Bottles from Feature 32 (Cellar) and Feature 170 (Privy)

1: #B58, 1870-1920. 2: #B18, 1880-1920. 3: #B75, 1880-1920. 4: #B24, 1880-1900. 5: #B72, 1880-1920. 6: #G25, 1850-1860 (Feature 170). 7: #B76, 1880-1920.

TABLE 21

Summary of Coins

DESCRIPTION	DATE	UNIT / FEATURE
Flying Eagle cent	1857	N80 E45, Level 1, plow zone
Indian Head cent	1863	Feature 32, Unit E, Level 5
Indian Head cent	1864	Feature 32, Unit E, Level 5
Indian Head cent	1864	N70 E125, Level 1, plow zone
Indian Head cent	1864	N95 E115, Level 1, plow zone
Indian Head cent	1864	N65 E125, Level 1, plow zone
Indian Head cent	1865 or 1866	Feature 195, south half, post hole
Indian Head cent	1873	S5 E55, Level 1, plow zone
Indian Head cent	1882	Feature 32, Unit D, disturbed floor area
Wheat cent	1910	N15 E110, Level 1, plow zone
Wheat cent	1911	N55 E110, Level 1, plow zone
Wheat cent	1914	Feature 32, Unit B, Level 2
Liberty Walking half dollar	1918	N65 E125, Level 1, plow zone
Wheat cent	1918	N20 E80, Level 1, plow zone

TABLE 22

Summary of Faunal Remains from Features

SPECIES	MINIMUM NO. OF INDIVIDUALS	BONE COUNT	% OF BONE	GNAWED BONE	CUT BONE
Cow	2	16	2.4%	3	11
Pig	2	87	13.3%	6	6
Sheep	1	2	0.3%	–	–
Opossum	1	1	0.2%	–	–
Cat	2	306	46.8%	–	–
Rabbit	1	3	0.5%	–	–
Squirrel	1	1	0.2%	–	–
Turtle	2 (1 painted)	6	0.9%	–	–
Rat	3	11	1.7%	–	–
Fish	1	1	0.2%	–	–
Canadian goose	1	1	0.2%	–	–
Bird (species unknown)	–	96	14.7%	7	–
Unidentified mammal	–	123	18.8%	–	–
TOTAL	17	654		16	17

SOIL ANALYSIS

Archaeologically derived patterns or concentration of certain soil trace elements can be correlated with the occurrence of particular activities that reflect site usage or human behavior (Sopko 1983:24-30; McManamon 1984; Custer et al. 1986). This analysis shows general patterns of spatial utilization and can also help determine activity areas, particularly when used in conjunction with artifact distribution patterns (Custer and Cunningham 1986; Coleman et al. 1985; Shaffer et al. 1988:132-141). The chemical analyses of the soils from the Cazier site were conducted by the Soils Laboratory of the University of Delaware College of Agriculture.

Relative frequencies of phosphates, calcium, potassium, and soil pH across the site were studied. Phosphate levels were probably the most significant of the chemical analyses because high levels of phosphate were indicative of chemical evidence of human or animal activities. Accumulation of phosphate was usually caused by the deposition of urine, excrement, and organic refuse. Archaeologists have suggested that such concentrations could be the results of refuse disposal of organic wastes, purposeful manuring, or an area where animals were confined by fences or structures (Catts and Custer 1990, Custer et al. 1986). High calcium concentrations could be the result of agricultural fertilization (i.e., liming), oyster or clam shell deposition, or the presence of building materials in the soils, such as mortar or cement. Magnesium concentrations were affected by most of the processes controlling calcium concentrations, but were especially elevated if dolomitic limestone was in use. Elevated concentrations of potassium were derived from the deposition of wood ash through surface burning or from dumping fireplace or stove ash. Soil pH readings of 7.0 or greater were indicative of alkaline soils, while readings below 7.0 reflected acidic soils. Since Delaware soils are naturally acidic (Matthews and Lavoie 1970), readings above 6.0 indicated agricultural liming.

Soils from the Cazier site were collected from each of the randomly excavated plow zone test units, and from each of the 10'x 10' subsoil units. If chemical patterning of the site had been altered by post-occupational contamination due to agricultural fertilization, the sample taken from the subsoil would be less likely to have been affected, and therefore, more reflective of earlier intra-site soil patterns. A similar sampling scheme was employed with success at the Whitten Road site (Shaffer et al. 1988), The Williams site (Catts and Custer 1990), and the Temple site (Hoseth et al. 1990).

The soil analysis results of the Cazier site are presented in a series of frequency distribution maps (Figures 22-26) that show both the plow zone and subsoil chemical distributions. The similarities of phosphate levels between the plow zone and subsoil were easily discerned. The area west of the western fenceline and south of the southern fenceline exhibited very low levels of phosphate. The yard area inside the fencelines reflected high levels of phosphate, with a major peak located at N70E65 in the plow zone soils and at N70E70 in the subsoil level (Figure 22). This concentration of phosphate was centered around Feature 170 (privy), the northern fenceline, and the possible animal pen.

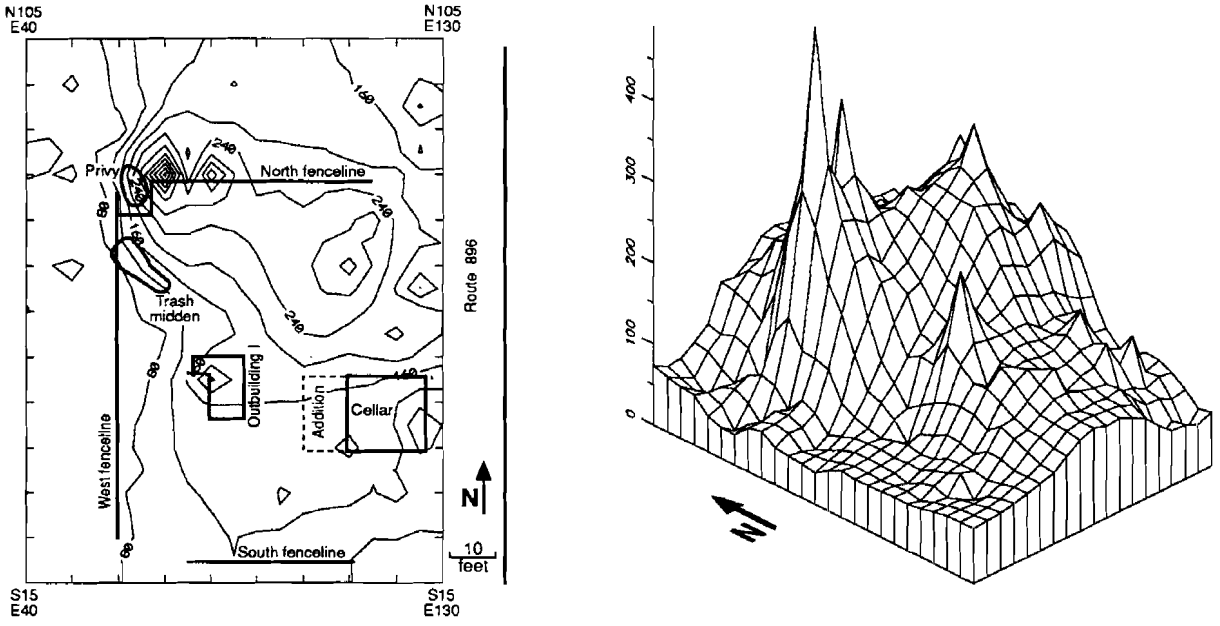
Potassium levels from the plow zone displayed a number of peaks across the site, with the highest levels located along the eastern limits of excavation near the Route 896 road ditch (Figure 23). These high readings were possibly the result of twentieth century ditch fires, or the materials used in the construction of the road itself and were not directly related to the site occupation. However, in the subsoil, a concentration of potassium was present south of the cellar (Figure 23). It has been verified archaeologically and through interviews that a fireplace, as well as a wood-burning stove, were located along the east wall of the dwelling. Thus, this peak could have reflected a possible wood ash disposal area. The concentration centered around Outbuilding I in the plow zone was a probable result of building demolition. High levels near the nineteenth century privy area (Feature 170) in both the plow zone and the subsoil was likely the result of wood ash dumping or burning of trees or shrubs.

Calcium densities were generally higher in the eastern portion of the site; the area west of the western fenceline displayed minimal readings (Figure 24). The lower elevation of the northeast portion of the site (Figure 10) could have had periods of standing water during wet months throughout the years, accounting for the very high levels of calcium found in both the plow zone and subsoil in this area. A high density of calcium in the subsoil at the location of Outbuilding I and the foundation, as well as the area between the two buildings, could have reflected the presence of building materials used in the construction and subsequent removal of Outbuilding I, the dwelling and the twentieth

FIGURE 22

Phosphate Distribution

PLOW ZONE



SUBSOIL

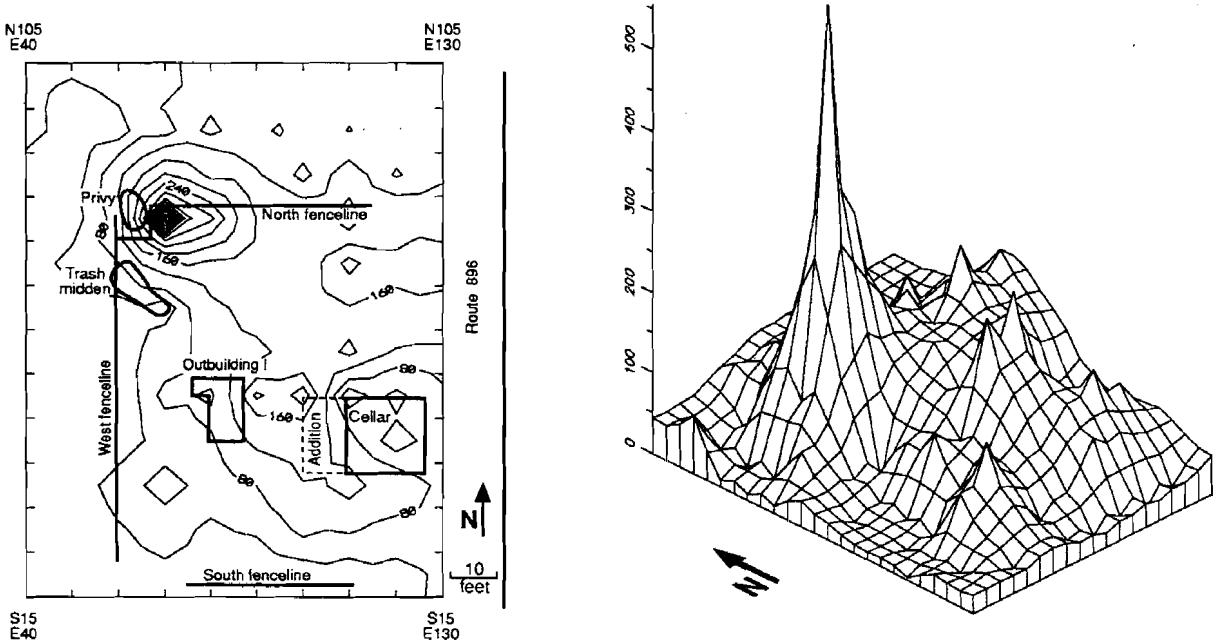
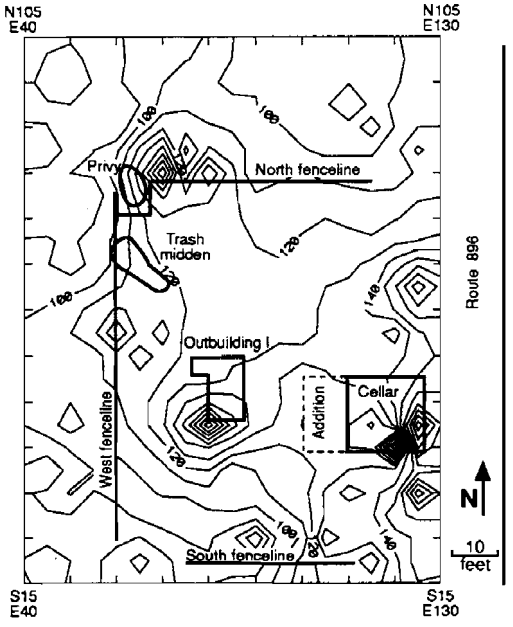
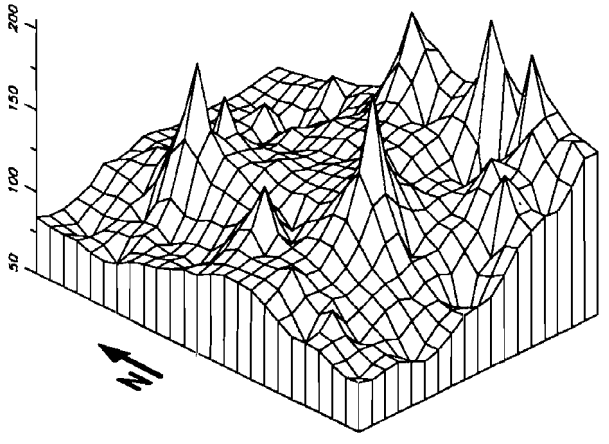


FIGURE 23

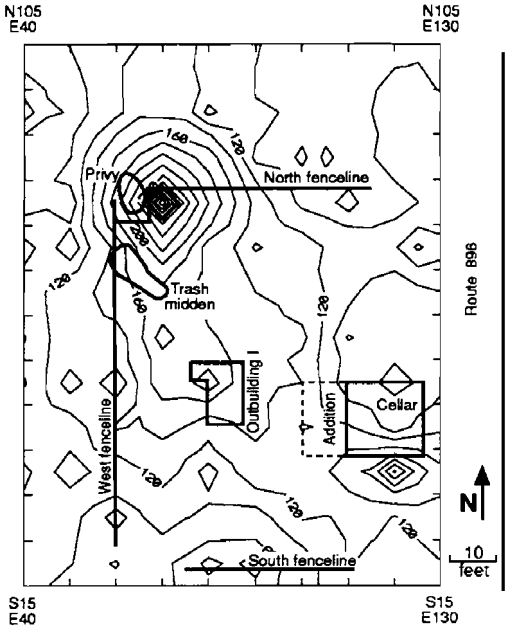
Potassium Distribution

PLOW ZONE





SUBSOIL



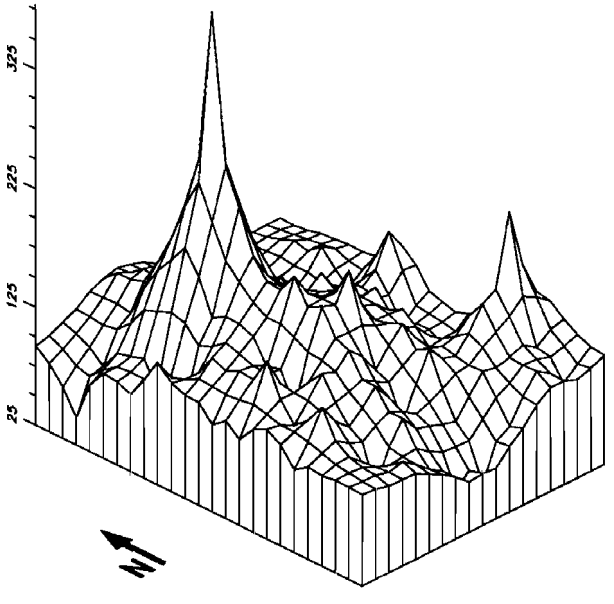
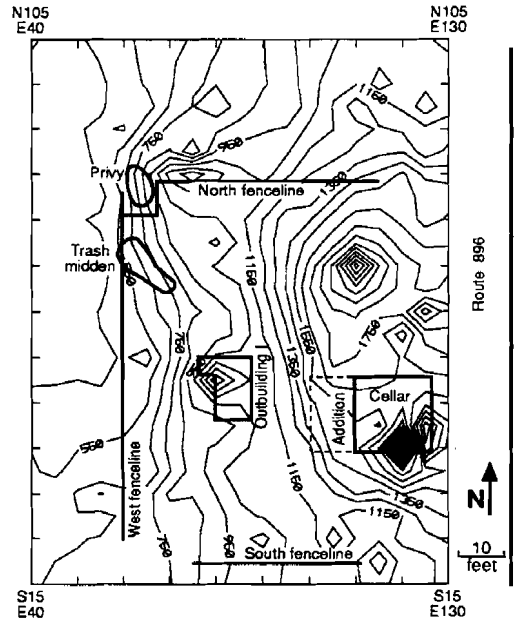
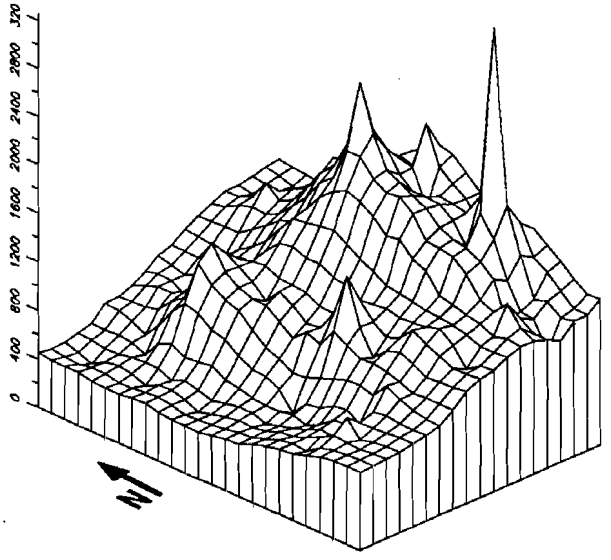


FIGURE 24

Calcium Distribution

PLOW ZONE





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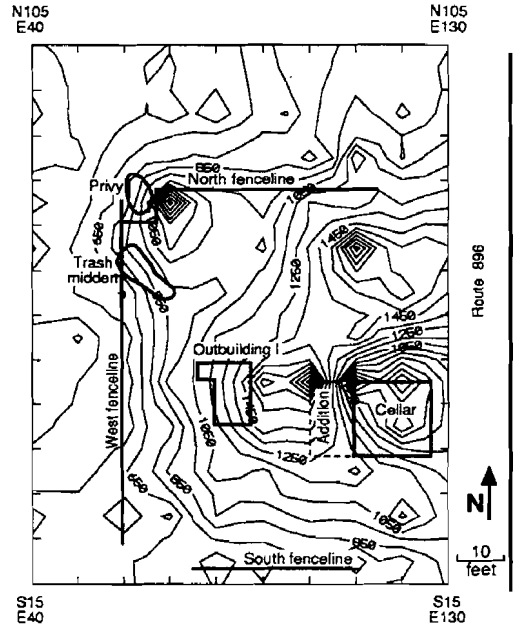


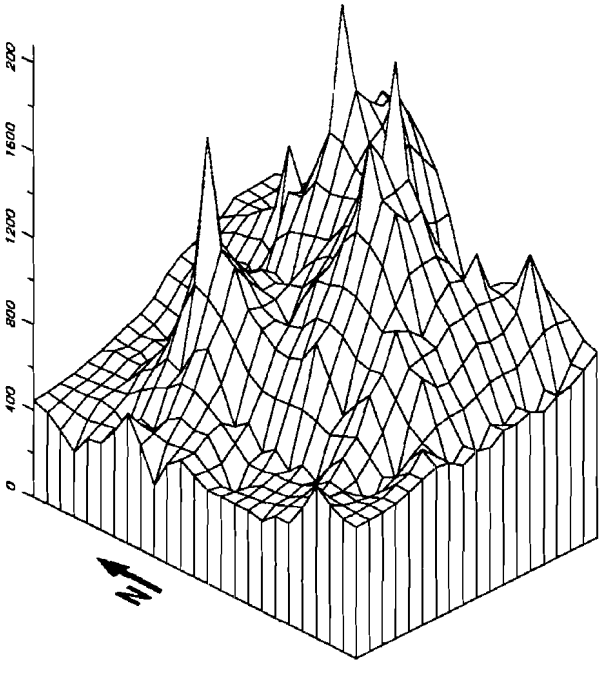
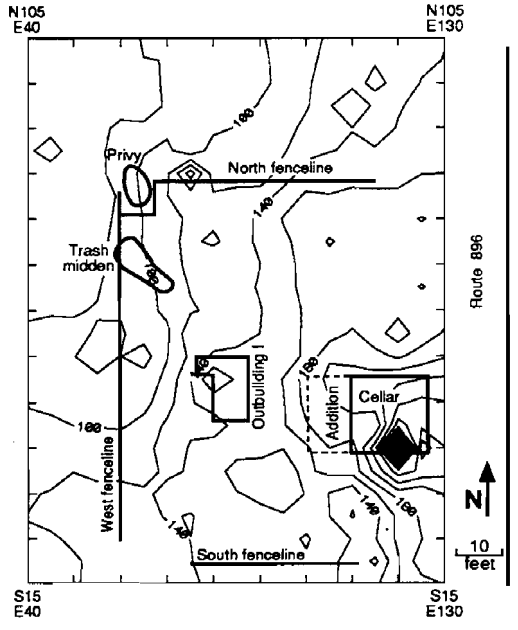
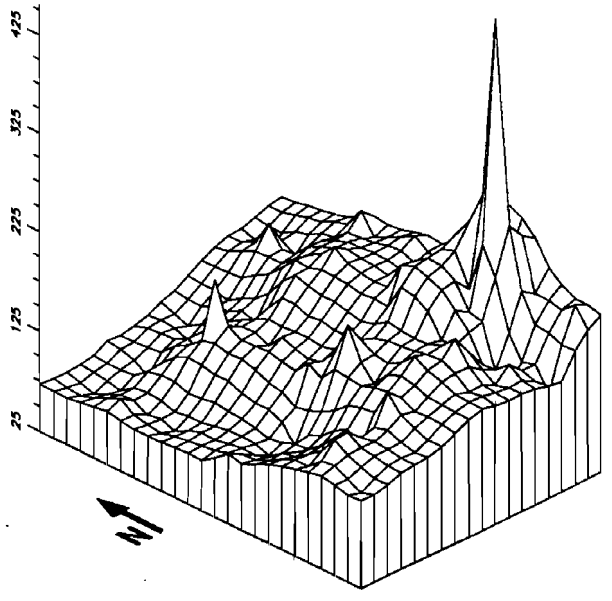


FIGURE 25

Magnesium Distribution

PLOW ZONE





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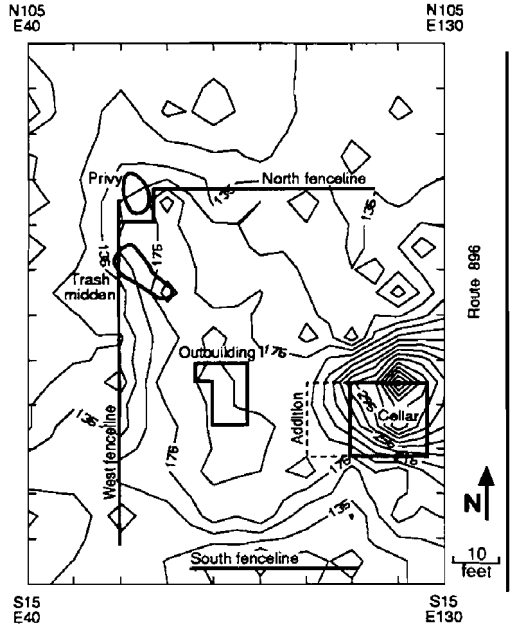


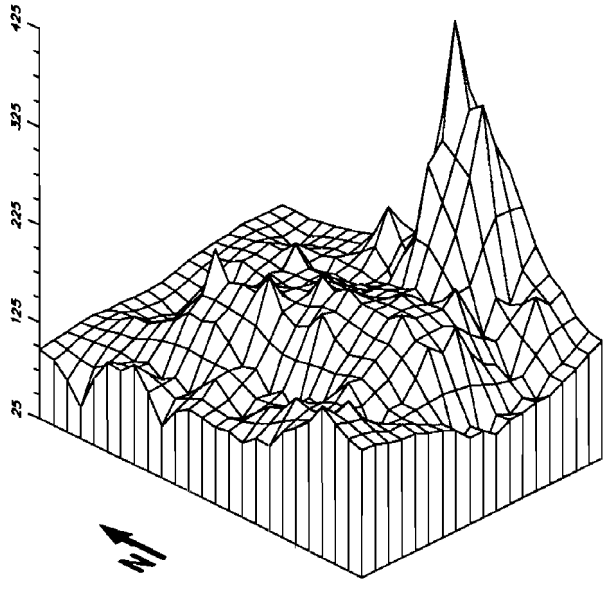
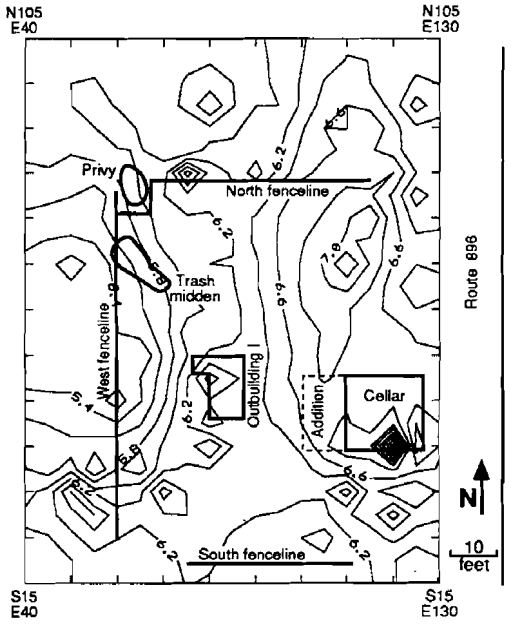
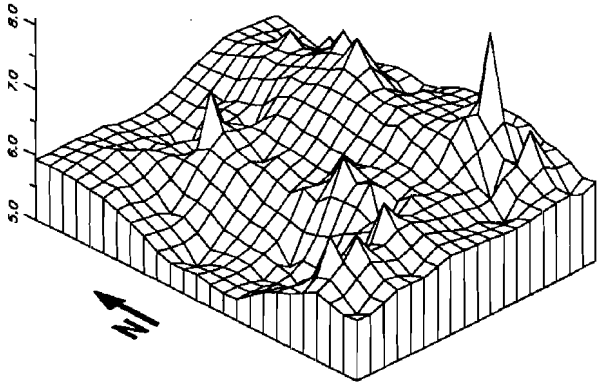


FIGURE 26

pH Distribution

PLOW ZONE





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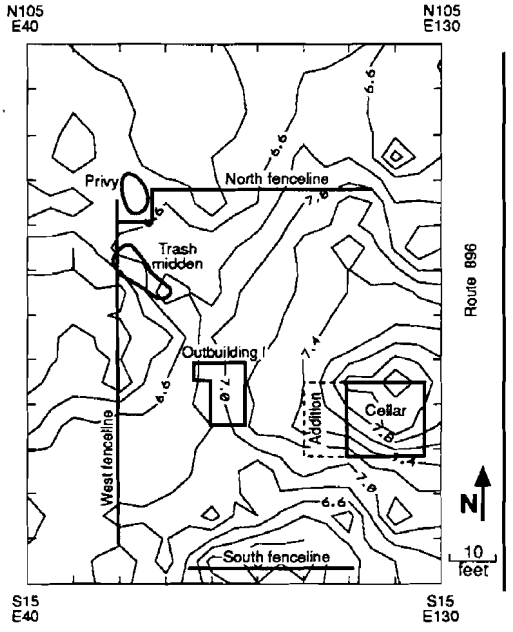
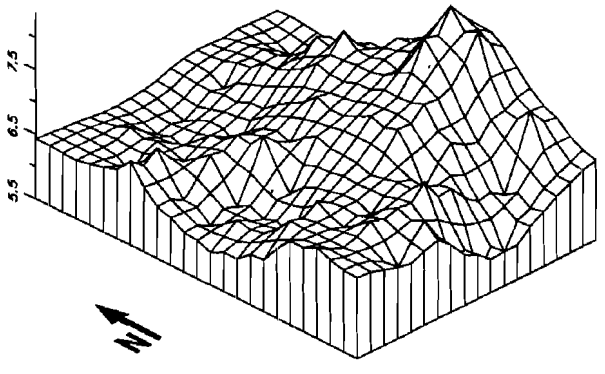




century privy (Features 36 and 173). The high concentration near the nineteenth century privy area (Feature 170) in the subsoil was not well reflected in the plow zone soils. The Stevenson family maintained a garden in this area in the late 1800s that was probably fertilized with lime and/or clam and oyster shells accounting for the high calcium readings in the subsoil. Farming activities in this area during the twentieth century could also have been a factor in the uniform calcium densities in the plow zone.

Magnesium levels were high in the eastern three quarters of the site in the plow zone soils with a dramatic increase located above the south wall of the foundation (Figure 25). Subsoil levels were similar to plow zone magnesium levels, but the highest reading was centered around the north wall of the foundation rather than the south wall. This concentration reflected the presence of building material, rather than agricultural liming.

The pH soil levels were low in the western portion of the site and gradually became higher moving east across the site, peaking along the eastern limits of excavation. This trend was observed in the plow zone soil, as well as the subsoil (Figure 26). The alkaline soils found along the eastern edge of the site limit could have either reflected road construction activities or years of accumulated agricultural liming, since the elevation toward the eastern portion of the site drops-off into the road ditch.

DISTRIBUTION OF PLOW ZONE ARTIFACTS

Artifacts collected during the plow zone sampling were plotted according to the frequencies where they occurred. Thirteen distribution maps were prepared based on the raw artifact counts obtained from the 5'x 5' and 3'x 3' test units (Figures 27-33). The distribution maps revealed areas of the site that contained artifact concentrations for specific artifact classes or groups. Intra-site comparisons among these artifact classes, as well as comparisons with other known cultural features, such as structures and fencelines, were useful in the determination of yard uses and patterns. Six separate ceramic categories were plotted according to their general chronology of manufacture: pearlwares, creamwares and other early nineteenth century wares, whiteware, and ironstone and other mid-nineteenth century wares (Rockingham and yellowware), all porcelains, all stonewares, all redwares, and a distribution map of all ceramics combined. Ceramics comprised the second largest artifact category recovered from the plow zone (27.9 percent). Two other groups of kitchen artifacts were plotted; one distribution map showed the frequency of bottle glass and another showed the frequency of all jar, table, household and unidentifiable glass. Kitchen glass represented the largest category of artifacts recovered from the plow zone (32.6 percent). Architecturally related artifacts were plotted on four distribution maps — window glass, brick (by weight), cut nails, wire nails, and one map depicting the frequency of all nails, including unidentifiable nails.

The total of all ceramics excavated is shown in Figure 27. The highest concentration of ceramics was located in the eastern three quarters of the site. High concentrations of ceramics were located directly above and north of the foundation. Ceramic concentrations were noticeably higher in the plow zone north of the northern fenceline, near the eastern site limit. The same high frequency was present along the southern fenceline.

Pearlware and creamware represented only 1.7 percent of all the ceramics excavated from the plow zone. Concentrations of these late eighteenth to early nineteenth century ceramics were located within the confines of the fencelines (Figure 27). An elongated peak was evident in the area between Outbuilding I and the addition. Another concentration was noticed south of the north fenceline at N55E90. A concentration of pearlware and creamware was evident just south of the trash midden.

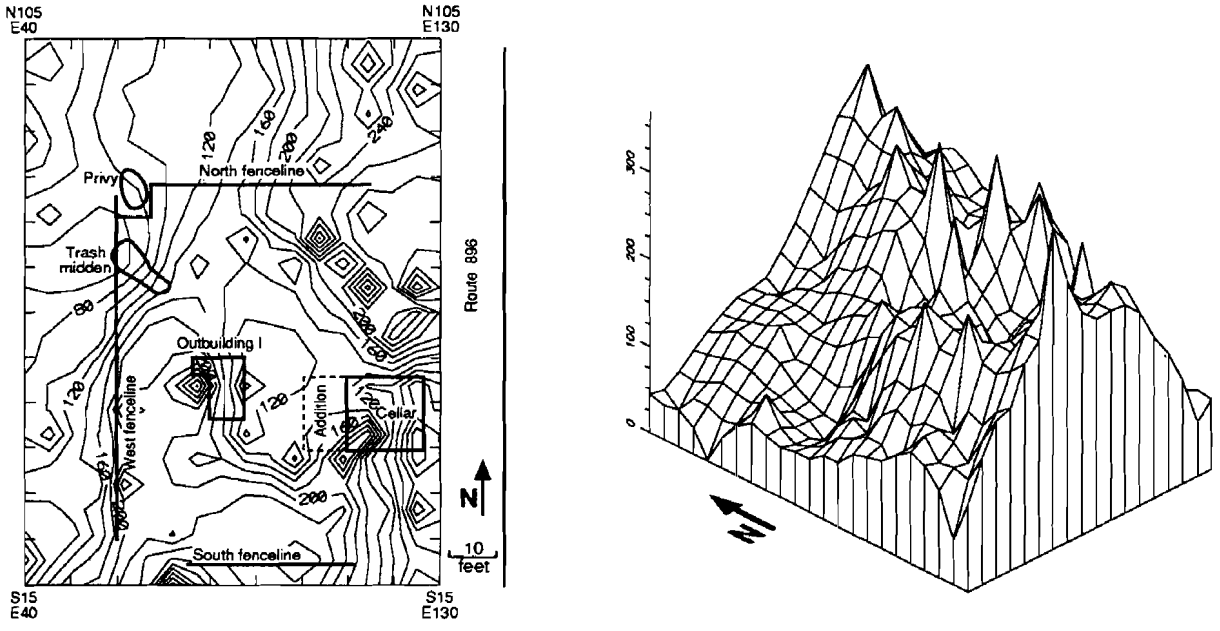
The majority of the ceramics found in the plow zone were whitewares, yellowwares, and ironstone (77 percent). The distribution of these mid-to-late nineteenth century ceramics was generally highest within the fencelines (Figure 28). High plateaus were noticed directly above the foundation and addition, increasing northward along the eastern limits of excavation and peaking on the north side of the northern fenceline. Low frequencies were apparent west of the western fenceline and the northwest corner of the site.

Figure 28 shows the distribution of porcelain excavated from the plow zone. The highest concentrations of porcelain were noticed at the northeast corner of the site on the south side of the northern fenceline.

FIGURE 27

Plow Zone Distribution of Total Ceramics and Late Eighteenth to Early Nineteenth Century Ceramics

TOTAL CERAMICS



LATE 18th TO EARLY 19th CENTURY CERAMICS

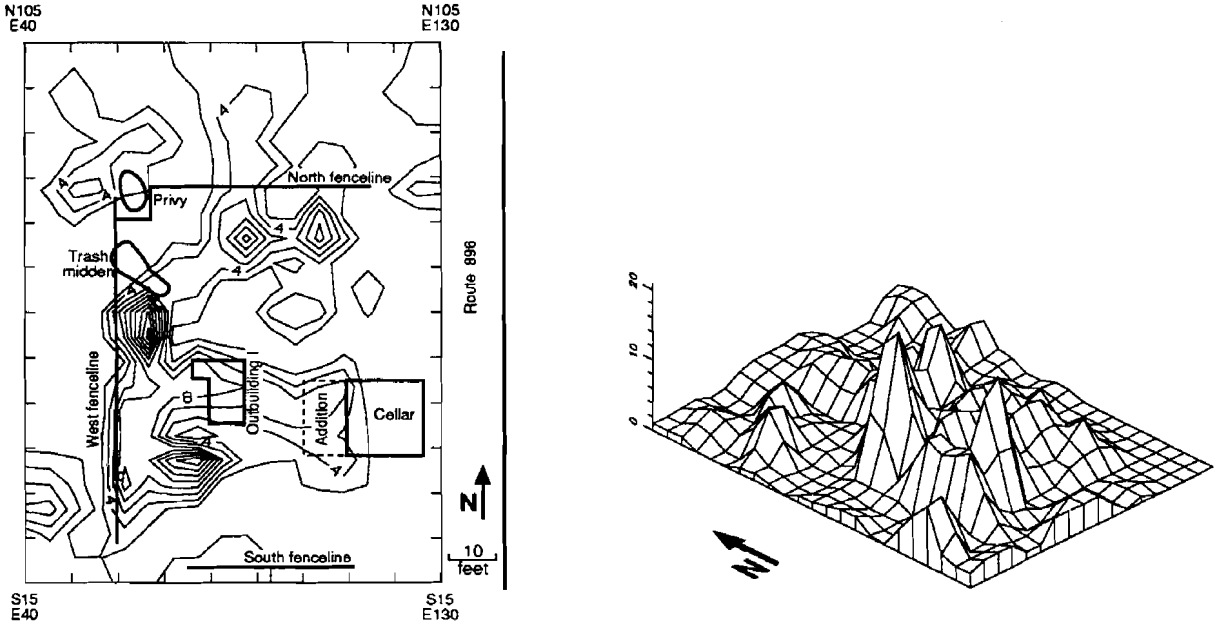
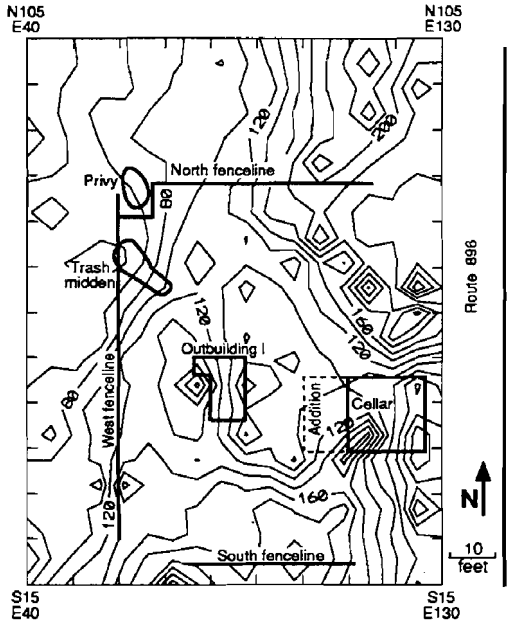
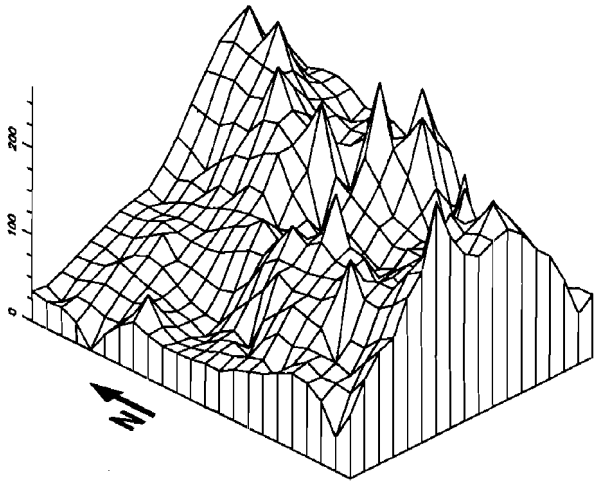


FIGURE 28

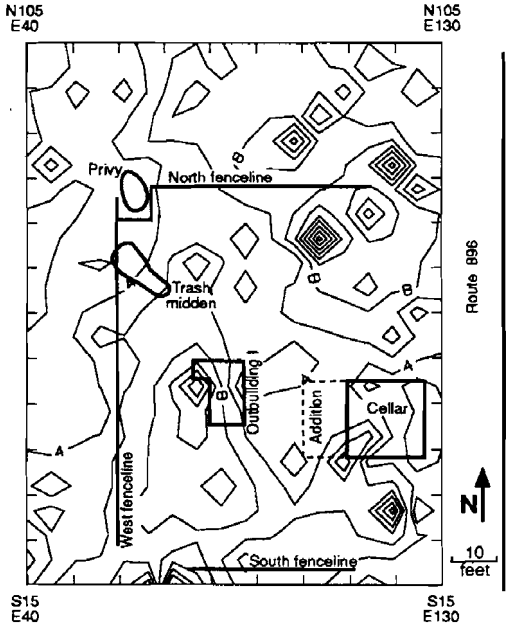
Plow Zone Distribution of Mid-to-Late Nineteenth Century Ceramics and Porcelain

MID-TO-LATE NINETEENTH CENTURY CERAMICS





PORCELAIN



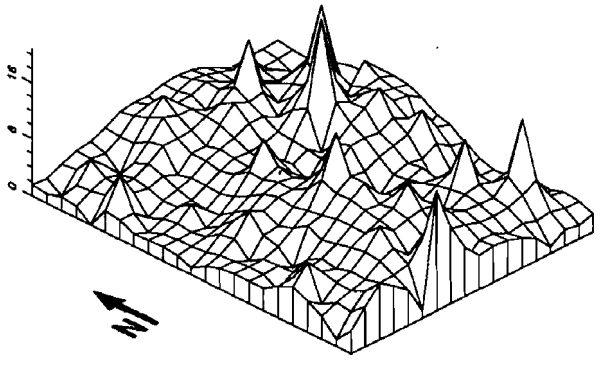
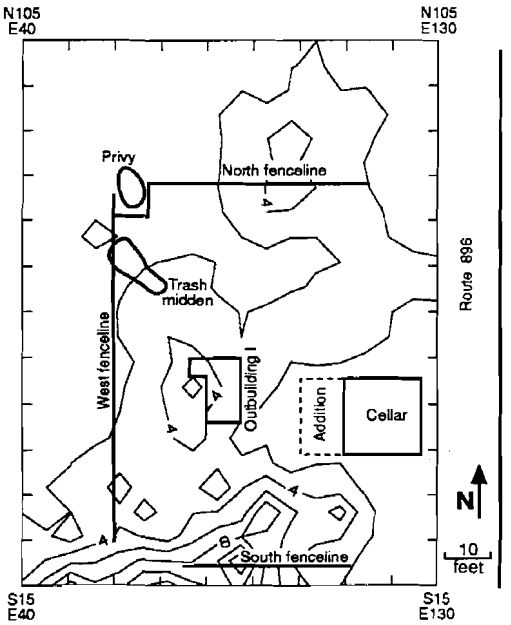
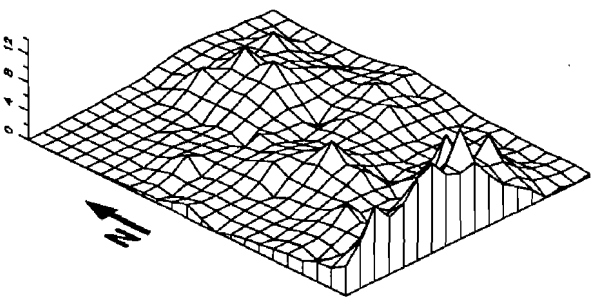


FIGURE 29

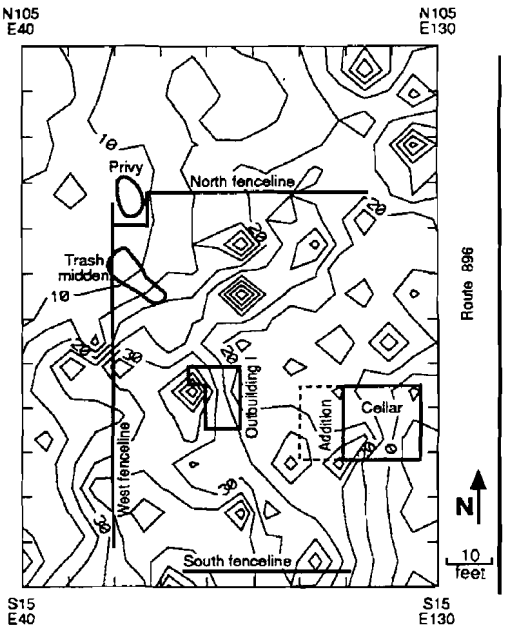
Plow Zone Distribution of Stoneware and Redware

STONEWARE





REDWARE



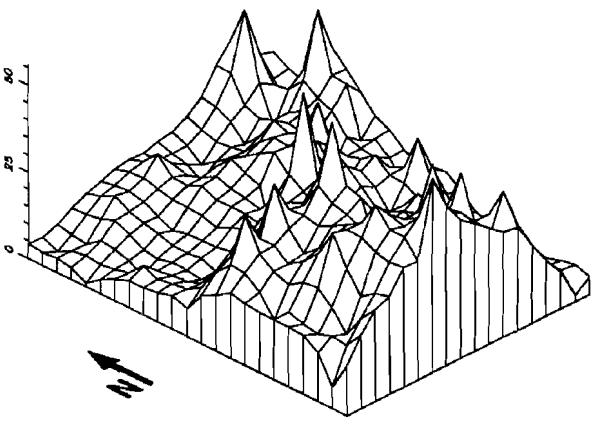
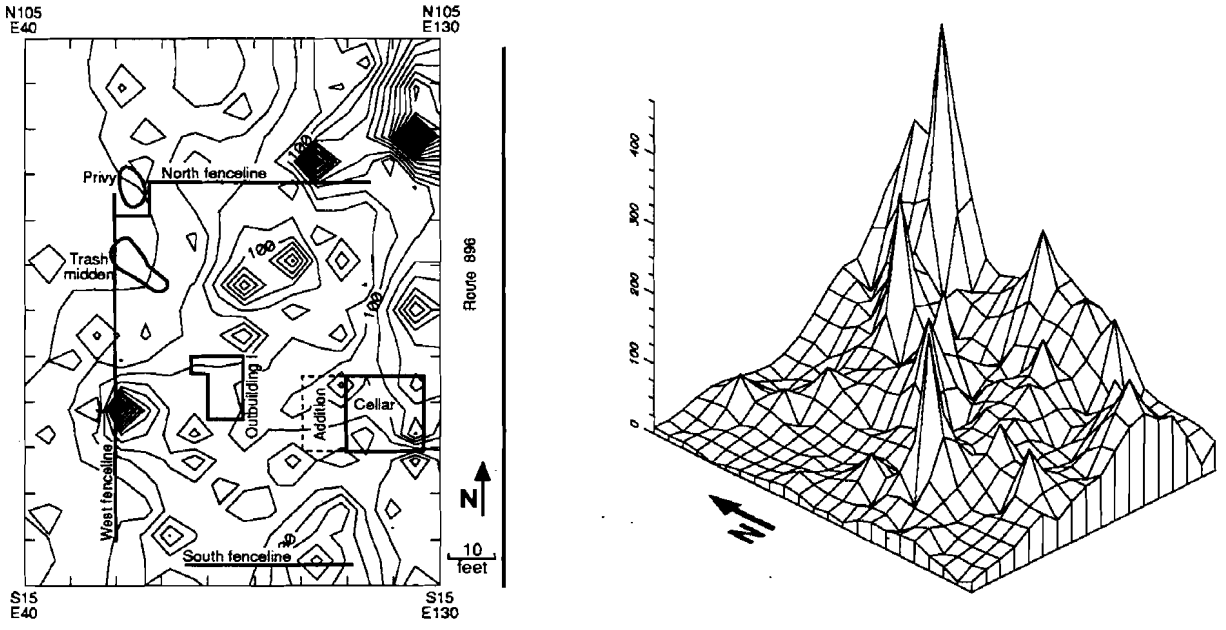


FIGURE 30

Plow Zone Distribution of Bottle Glass and Jar, Table, Household and Unidentifiable Glass

BOTTLE GLASS



JAR, TABLE, HOUSEHOLD AND UNIDENTIFIABLE GLASS

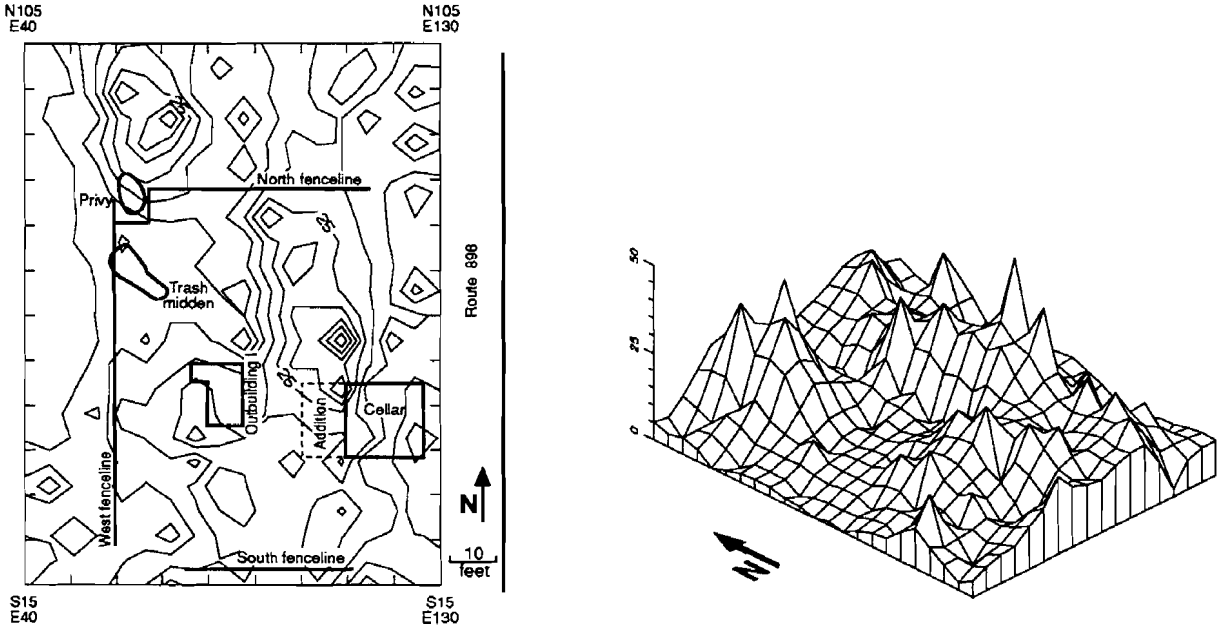
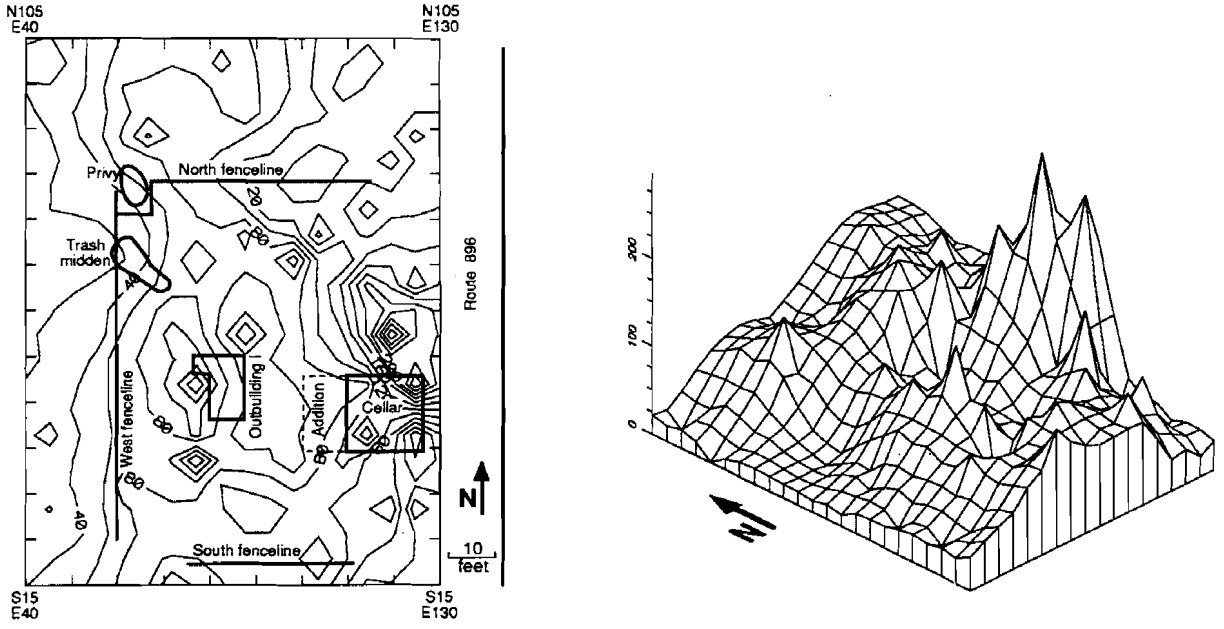


FIGURE 31

Plow Zone Distribution of Window Glass and Total Nails

WINDOW GLASS



TOTAL NAILS

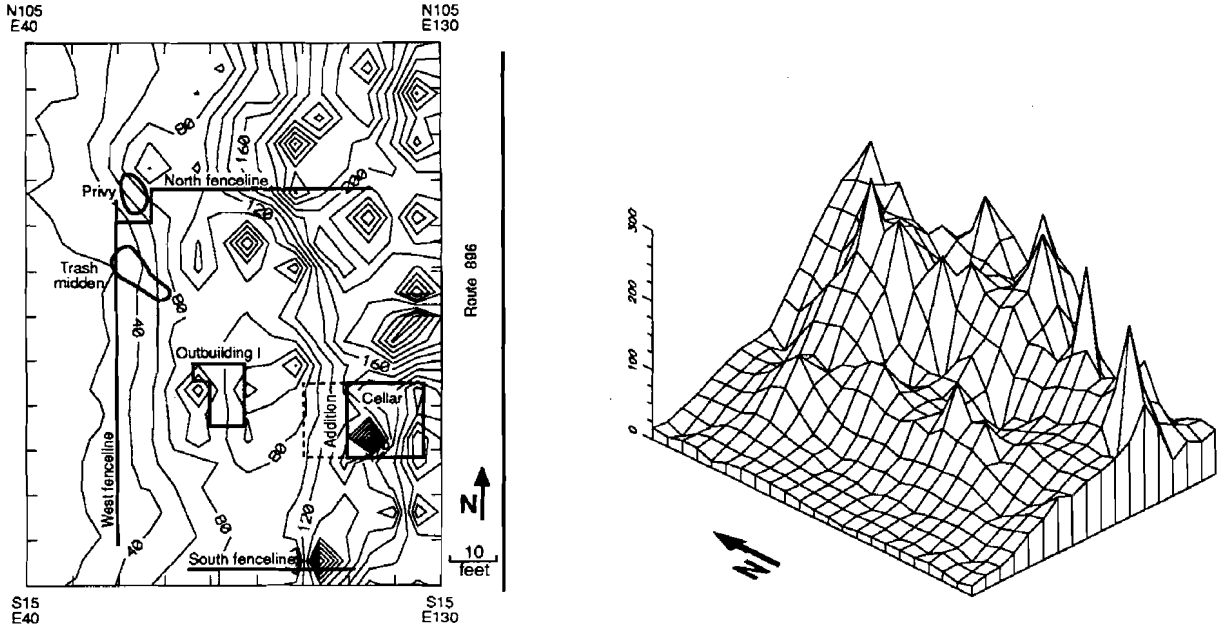
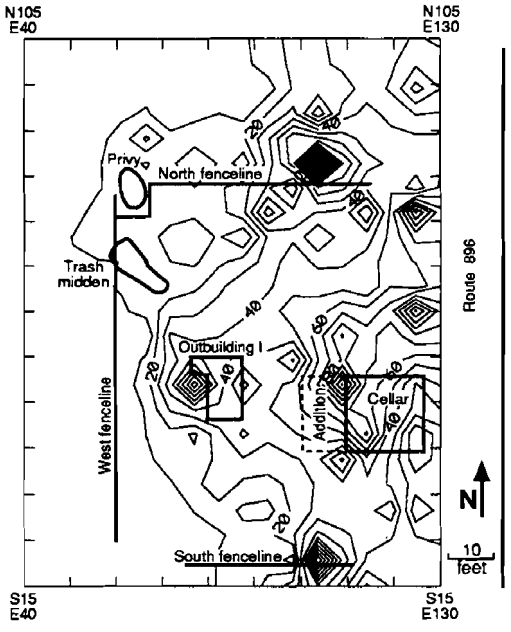
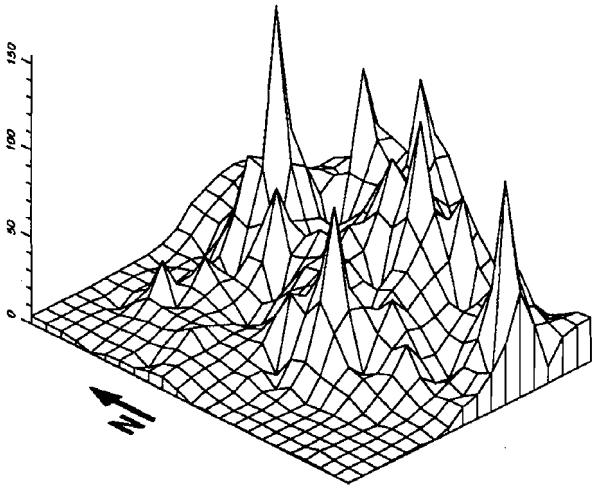


FIGURE 32

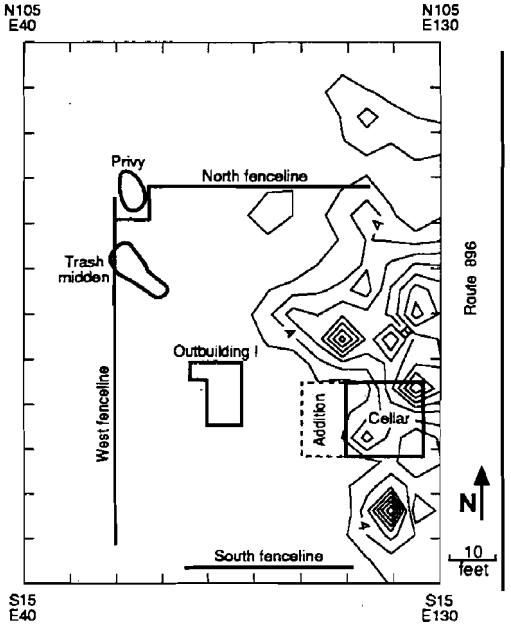
Plow Zone Distribution of Cut Nails and Wire Nails

CUT NAILS





WIRE NAILS



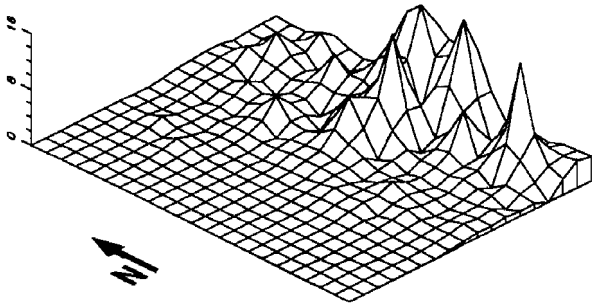
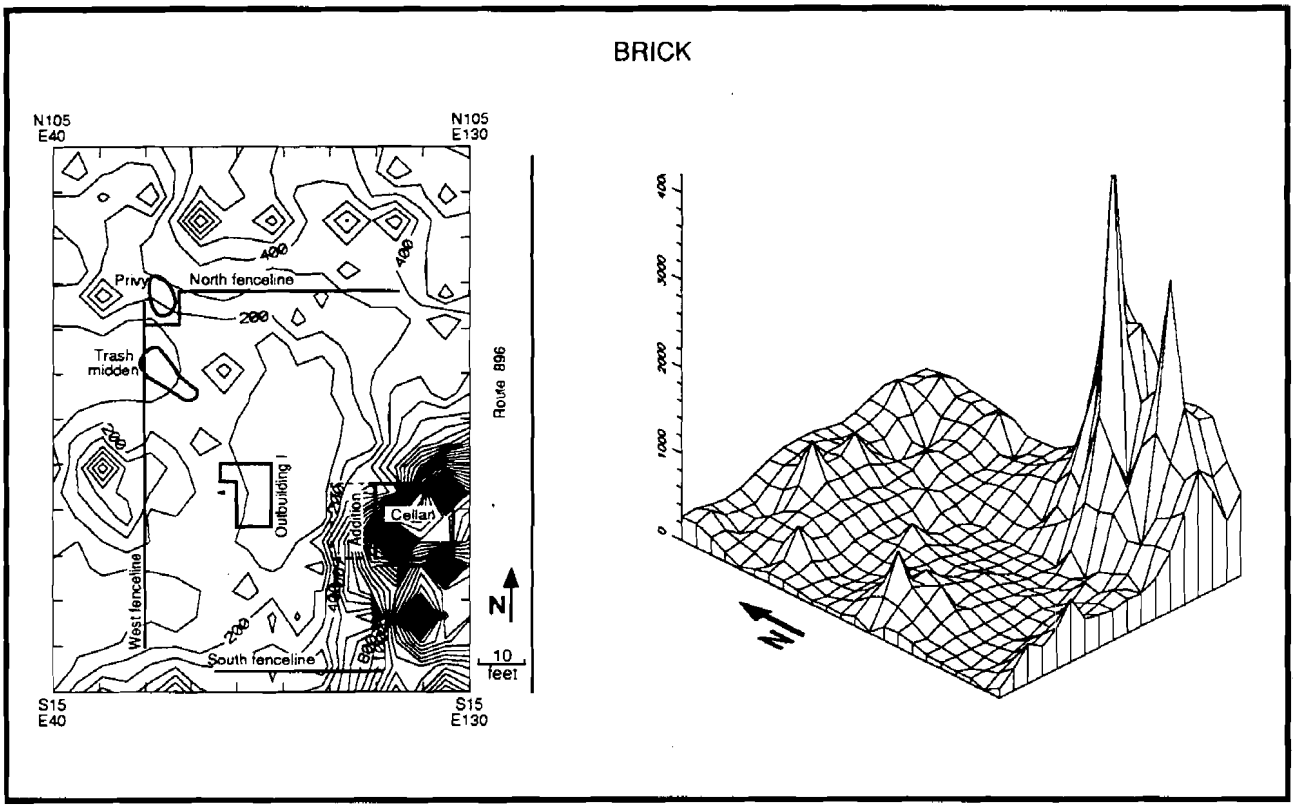


FIGURE 33
Plow Zone Distribution of Brick



Less than 300 fragments of stoneware were excavated from the plow zone, but the distribution map revealed a linear concentration of stoneware apparent along the south fenceline (Figure 29). A definite lack of stoneware was apparent in the northwest portion of the site.

The highest frequency of redware excavated from the plow zone was observed north of the northern fenceline (Figure 29). Another concentration of redware was located between Outbuilding I and the western fenceline.

The remainder of kitchen artifacts were plotted on two maps. Figure 30 shows the distribution of bottle glass and the distribution of jar, table, household, and unidentifiable glass respectively. Bottle glass concentrations were highest in the northeast corner of the site, north of the northern fenceline. High concentrations of bottle glass were also apparent along the western fenceline at N20E60, and along the eastern wall of the foundation. Densities of jar, table, and household glass were generally higher north of the northern fenceline and north of the cellar.

Window glass concentrations were located in the plow zone directly above the foundation and addition, and above Outbuilding I (Figure 31). The area west of the western fenceline (50 feet from the foundation) had very low amounts of window glass.

Figure 31 revealed definite concentrations of nails directly above the foundation and addition in the plow zone. Other concentrations were noticed in the northeast corner of the site north and south of the northern fenceline. Both the cut nail distribution and the wire nail distribution presented similar concentrations north of the addition (Figure 32). A high density of cut nails was identified in the plow zone in the northeast corner of the site at N70E100 and directly above Outbuilding I at N25E75. Wire nail frequencies were higher along the eastern limits of excavation, along the road (Route 896) ditch.

TABLE 23

Mortar Sample Numbers and Ratio Percentages

SAMPLE #	UNIT	LEVEL	FEATURE	LIME %	CLAY %	SAND %	PROPORTION
1	B	4	32	81	1.0	10	High lime
2	B	2	32	93	0.2	2	High lime
3	B	2	32	31	0.3	65	Similar
4	B	3	32	31	0.5	64	Similar
5	B	--	32	30	0.5	68	Similar
6	B	4	32	92	0.0	3	High lime
7	C	3	32	53	--	39	Similar
8	C	4	32	48	2.0	46	Similar
9	C	4	32	13	2.0	82	High sand
10	E	2	32	51	0.3	44	Similar
11	E	3	32	31	0.3	66	Similar
12	E	5	32	56	1.0	37	Similar
13	--	--	32	54	1.0	34	Similar
14	--	--	59	88	0.0	8	High lime
15	--	--	65 S1/2	58	0.0	36	Similar
16	--	--	65 N1/2	56	--	38	Similar
17	--	--	139 S1/2	52	0.0	40	Similar
18	--	--	139 N1/2	47	3.0	37	Similar
19	--	--	132	34	1.0	60	Similar
20	--	--	99	93	0.0	3	High lime
21	--	--	118	92	1.0	1	High lime
22	--	--	71	9	3.0	81	High sand

As was expected, a high frequency of brick was centered above and in the immediate vicinity of the brick house foundation (Figure 33). This smearing of the brick fragments around the house foundation was probably a result of twentieth century farming activities.

MORTAR ANALYSIS

A variety of mortar types dating from the nineteenth through the twentieth centuries were recovered from the Cazier site. The ratio of lime versus clay versus sand was used to determine the type of mortar formula used in the construction of buildings, following processes developed by Alan Tabachnick (1988:1-7). Generally lime-sand mortars were used in construction until 1880, and Portland Cement was a major ingredient in mortar after 1880 (McKee 1980:69). Mortar containing Portland Cement exhibits high ratios of sand versus lime and clay.

Thirteen mortar samples were examined from various levels in Units B, C, and E of Feature 32 (Cellar; Figure 11). All mortar samples contained little or no clay. Nine of the samples contained similar proportions of lime and sand, in which the ratio of lime versus sand was nearly equal with small traces of clay (Sample Numbers 3, 4, 5, 7, 8, 10, 11, 12, and 13; Table 23). Three samples from Unit B (Figure 11) contained high lime ratios — eight to nine parts lime to one part sand and less than one half part clay (Sample Numbers 1, 2, and 6; Table 23). One sample from Unit C (Figure 11) contained a high sand ratio — eight parts sand to one and a half part lime to one half part clay (Sample Number 9; Table 23). The high ratio of sand in the sample suggested the use of Portland Cement in the mortar, indicating a date of post 1880. Unfortunately, all samples from the cellar were taken from the cellar fill that was determined at a later date to have been debris from the demolition of the brick house in the 1920s.

One mortar fragment excavated from a support post of the west wall of the western addition (Sample Number 14; Table 23; Figure 11) contained a high ratio of lime versus sand. This sample was very similar to the mortar samples excavated from Unit B (Sample Numbers 1, 2 and 6). Two mortar samples taken from the Trash Midden (Features 37, 37A, and 65; Figure 10) contained equal proportions of lime versus sand (Sample Numbers 15 and 16; Table 23). Mortar samples excavated from Feature 139 and 132 (support posts for Outbuilding I; Figure 10) also contained equal lime and sand ratios (Sample Numbers 17, 18, and 19; Table 23). Features 59, 99, and 118 contained fragments of mortar with high ratios of lime — nine parts lime to less than one part sand (Sample Numbers 14, 20 and 21; Table 23; Figure 10). A post feature (Feature 71; Figure 10) in the northern fenceline contained a mortar fragment that exhibited a high ratio of sand (Sample Number 22; Table 23), suggesting a date of post 1880, based on the presence of Portland Cement.

Although the majority of the mortar samples taken from the Cazier site were from secondary deposits of cellar fill, general statements using the information gleaned from the mortar analysis were made. Twelve of the thirteen mortar samples from the cellar (Feature 32) were determined to be lime-sand mortar, with varying ratios of lime to sand. Historical documentation stated that the brick house was built in 1844. The mortar analysis indicated that the dwelling was constructed using a variety of lime-sand mortar ratios, a method commonly used in structures built before 1880 (McKee 1980:62). Only one fragment of mortar displayed high sand ratios that would indicated a date of post 1880. This mortar sample could have been from a wall that was repaired after initial construction.

Only one mortar fragment was recovered from the support posts of the western addition (Feature 59). Mortar analysis testing indicated a high ratio of lime to sand, similar to the mortar fragments found within the cellar fill. Only a general construction date of pre-1880 can be made from the mortar analysis at the present time. But, this information linked with the presence of creamware and cut nails excavated from the structural posts, as well as the absence of windows on the west side of the house and the intrusion of structural posts into the builder's trench indicated that the addition was probably built after 1844 and before 1880.

SITE INTERPRETATIONS AND CONCLUSIONS

Archival research determined that the Cazier site foundation was the remains of a tenant house built by Henry Cazier in 1844. Henry Cazier intentionally constructed the brick house at the juncture of Route 896 and the lane that led to his farm, "Mount Vernon Place." Contingent upon renting the small house was an agreement by the tenant to open and close the gate. This was probably how the brick house became locally known as the "gate-house for Cazier's mansion." The brick foundation measured 17.6 feet by 17.4 feet. A bulkhead entrance on the south side of the dwelling led into the cellar, which had a dry-laid brick floor and a brick chimney in the center of the east wall.

The identity of the first occupants remains unknown. More is known about the second period of occupation from circa 1880 to 1910. The occupants in this period was Nicholas Stevenson and his family. Elizabeth Stevenson Stafford, his daughter, provided an oral history of the site. The tax assessment of 1890 indicated that Stevenson was a black day laborer living in Pencader Hundred, who did not own property. Nicholas worked as a "horseman" for Jacob Cazier and drove a two horse family carriage. He walked up the lane to work everyday, sometimes taking a few of his children to play at the mansion. The Stevenson family maintained a garden on the tenant property located behind the privy and northwest of the house. Nicholas, his wife Mary, and four of their nine children lived in the gate-house until circa 1910, when he received a few acres of land near Lums Pond from the federal government.

Jacob Cazier died in 1918 and the responsibilities of Mount Vernon Place fell upon his wife, Sarah. Nothing was known of the inhabitants of the gate-house during this time. Sarah Cazier died three years later and the estate went to her daughter Edna Cazier Townsend, who rented the whole Mount Vernon Place farm to the Biddle family in 1925. Richard Biddle remembered that the little brick house was empty when his family first moved to the mansion. He and his father farmed the land surrounding the gate-house, leaving only 15-20 feet from the field edge to the house and outhouse. The outhouse was located 10 feet west of the brick house.

The third identifiable period of occupation was by Rudolph and Ethel Stevenson from circa 1920 to 1935. Rudolf was involved with the expansion of the Chesapeake and Delaware Canal and Ethel worked for the Biddle family

as a laundress. The Stevensons had a very small yard area between the front wooden porch and their strip garden, located south of the lane to the mansion. The Rudolf Stevensons moved from the house in 1934, and the house was torn down shortly thereafter.

Temporal yard usage and size of the Cazier site changed from the nineteenth century to the twentieth century because the requirements of the tenant families varied—based on their occupations and size of their families. The Nicholas Stevenson family consisted of 6 people and would have required more living space than the two members of the Rudolf Stevenson family. Both men were day laborers, working away from their homes each day. Both families maintained a garden. During the nineteenth century, the tenant house, outbuildings, and fenced yard were probably required to be kept neat and in good repair due to the proximity of the tenant property to Glasgow Road (Route 896) and the function of the dwelling as a gate-house. Henry and Jacob Cazier not only used the dwelling to house their gatekeepers and carriage drivers, but as a symbol of their high status. The size of the Cazier site yard was reduced from 600 square feet to 200 square feet in the twentieth century during the Rudolf Stevenson occupation. After the death of Jacob Cazier, the gate-house was no longer needed as a status symbol.

Based on the patterns of post hole features located west of the brick foundation, a 17'x 9' post-in-ground addition to the small brick house was made after initial construction of the dwelling. Posts along the west wall of the foundation intruded into the foundation's builder's trench. Richard Biddle, a tenant farmer of the land surrounding the Cazier site from 1925 to 1945, remembered only a small brick house with attached wooden porch on the south side. He made no mention of a wooden addition on the west side, but stated that no windows were present on this side, unlike the east side that had two windows with four panes each. The absence of windows on the west side of the house, and the presence of post patterns, some intruding into the house foundation builder's trench, suggested that a frame addition was constructed after 1844. The oldest artifacts recovered from the plow zone and feature excavation were found in this area. These artifacts included cut nails, creamware and pearlware. The addition to the small brick house could have also represented the presence of a larger tenant family than was originally intended. Through twentieth century oral history it was known that by 1925 the addition was no longer extant. The removal of the addition in the beginning of the twentieth century suggested that the number of house occupants, or family size, continued to play a role with determining the size of the house.

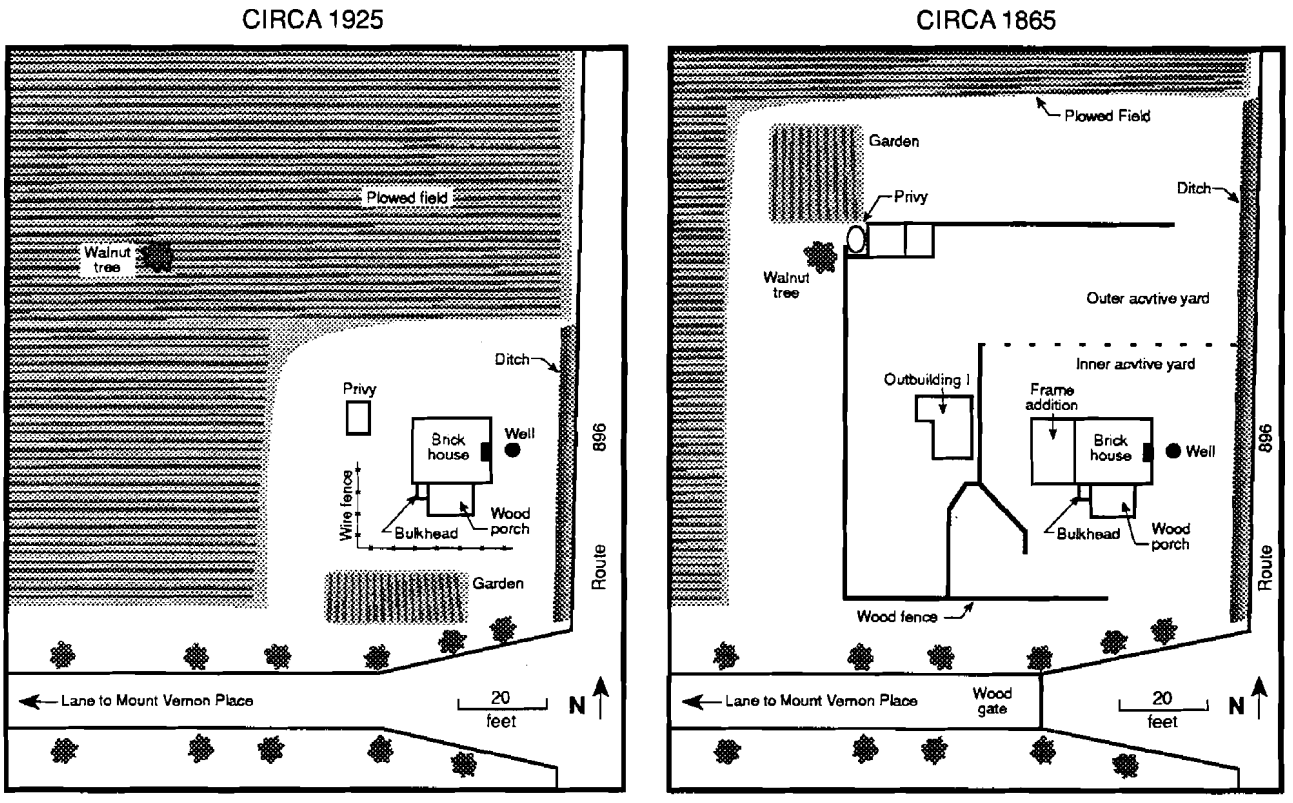
A 10' X 5' wooden porch was added to the south side of the brick house sometime after 1865 or 1866, based on the large post hole and mold patterns in this area and the excavation of an Indian Head 1865 or 1866 coin from the post hole of one of the porch support posts. The porch remained a part of the gate-house until 1935, when the house was demolished by the Delaware Transportation Department during the widening of Route 896.

All the equipment and storage facilities necessary for the proficient operation of Cazier's large farm were located less than one half of a mile away, just down the lane from the tenant house. An illustration printed in Scharf's History of Delaware (1888) depicted the mansion and a barn, as well as several other outbuildings (Plate 4). The tenant living in the gate-house would have no need for his own farm equipment or storage for such items. The tenant family however, would require ancillary household support buildings such as privies and woodsheds. Research on extant farm complexes of the mid-nineteenth century in Delaware has shown that these types of household support structures were located close to the dwellings (Herman 1987a:176-179), while the placement of a privy would be a fair distance from the house and well for standard hygiene (Catts 1984). The placement of the nineteenth century privy at the Cazier site was approximately 50 feet northwest of the dwelling (Figure 34) — a fairly standard distance for the placement of the privies at other local rural sites in Delaware and Maryland (McDaniel 1982; Catts and Custer 1990; Hoseth et al. 1990). Similar placement has been observed in historical sites dating to the late nineteenth century in east Texas (Moir 1987:231-233). The twentieth century privy (Features 36 and 173) was anomalous, since it was located less than 10 feet from the house (Figure 34). This location was probably due to the small size of the yard area during this time.

The combination of oral documentation, archaeological features, artifact frequencies, and soil analyses results provided a unique view of temporal yard usage and proxemics for the occupants of the Cazier site (Figure 34). Moir and Jurney (1987:230) defined yard proxemics as the interpretations of the patterns of the yardscape around typical dwellings over time; in particular, the term referred to the "nature, degree, and effect of spatial separation between support structures, features, gardens, flower beds, fences, paths, and activity areas, around a primary structure".

FIGURE 34

Circa 1925 and 1865 Yard Proxemics



The majority of the features excavated at the Cazier site related to the late nineteenth century, when the site was occupied by an unknown tenant farm family or families and by the large Nicholas Stevenson family. It was possible that the property was abandoned for a period of time after the Stevensons moved and before the arrival of the Rudolf Stevenson family. The neglected house and outbuildings could have fallen into a state of disrepair and may have been torn down, providing more land to be farmed. Richard Biddle reported that his family plowed 15-20 feet from the brick house, suggesting that any earlier structures, like the western addition and Outbuilding I, were indeed gone by 1925.

Mr. Biddle recounted that the small brick house did not have a frame addition on the west side, but a wooden outhouse was situated ten feet west of the house and a pile of cut wood south of the outhouse. A large shallow feature filled with burned bone, glass, ceramics, cut and wire nails was located in the area mentioned by Mr. Biddle as the location of the twentieth century outhouse (Features 36 and 173; Figures 10 and 34). A slightly higher phosphate level was observed in the subsoil of this area, not as high as the phosphate levels of the nineteenth century privy (Feature 190), but the later privy was used for a much shorter period of time. Except for Features 36 and 173 and the cellar fill, no other features could clearly be associated with the Rudolf Stevenson occupation of the site, possibly due to the small yard the couple maintained.

The privy located 50 feet northwest of the house (Feature 170) was determined to have been in use from the initial construction of the dwelling until at least 1910 based on the ceramic types found in the feature fill. The mean ceramic date for the privy was 1837, due to the recovered fragments of creamware and pearlware. A glass panel medicine vial recovered from the flotation sample from Soil #1 was manufactured between 1850-1860. Very high peaks of phosphates and potassium were present in the plow zone and subsoils of this area.

A pattern of post features next to the privy could have been a 14' x 5' ephemeral outbuilding, covered woodpile, or even an animal pen (indicated by the high phosphate peaks in the area). One other structure belonging to the early tenants of the brick house was represented by a 12'x 8' rectangular series of post-hole and mold features thirty feet west of the dwelling (Figure 34). The ceramics found within the features of Outbuilding I provided a mean ceramic date of 1856.

The study by Moir and Jurney (1987:230-233) of the yard proxemics for late nineteenth century farms in east Texas indicated that an Active Yard (consisting of an Inner and Outer Active Yard) formed the nucleus of a farmstead. The Active Yard generally contains the dwelling, well, sheds and privy. Generally the Inner Yard was less-used and better maintained and the Outer Yard was more intensively used. On sites in Texas, the locations of privies and wells served to mark the border between the Outer Yard and the rest of the property. Researchers using yard proxemic theories in the study of tenant sites in rural Delaware have observed similar farmstead layouts as those in east Texas (Catts and Custer 1990 and Hoseth et al. 1990).

The Outer Active Yard at the Cazier site was defined by the northern, western and southern fencelines. Route 896 would have served as the eastern border. The Outer Yard was separated from the dwelling and Inner Active Yard by the central fenceline, and various alignments, located between the addition and Outbuilding I (Figure 34). The privy and a large walnut tree was located at the juncture of the northern and western fencelines. The garden was behind the privy outside the fenceline. A large trash midden was evident along the western fenceline. Other refuse areas not evident in the subsoil, were located north and south of the northern fenceline, and west of the possible animal pen or shed. The plow zone artifacts distribution maps show high frequencies of all types of artifacts in this area (Figures 27, 30, 31 and 33). The presence of a sheet midden in this area accounted for the lack of subsoil features. Two domestic cat burials were found within the Outer Active Yard.

Mr. Biddle reported a well located midway along the east wall of the dwelling, approximately 5-7 feet from the side of the house (Figure 34). The well was filled and eventually covered by the pavement of Route 896. This well served as the only source of water for the Cazier site throughout its entire history.

INTER-SITE ANALYSES AND INTERPRETATIONS

Archaeological data from the Cazier site on spatial organization, site structure, and consumption habits was used for comparisons with other sites in the Middle Atlantic Region with similar temporal periods of occupation, site function, or inhabitants. The results of the comparisons were then related to regional historical archaeological issues concerning the patterns and processes of social and cultural change. The Data Recovery Plan listed several nineteenth century tenant sites, from urban as well as agricultural contexts, to be used in the inter-site analysis of the Cazier site. These sites included the Robert Ferguson site (Coleman et al. 1983), the Howard-McHenry Tenancy (Hurry and Kavanaugh 1983), the late nineteenth century occupation of the Hawthorn site (Coleman et al. 1984), the Block 1191 investigations in Wilmington (Beidleman et al. 1986), the Temple site (Hoseth et al. 1990), and the Williams II occupation of the Williams site (Catts and Custer 1990). Only the Block 1191 investigations in Wilmington (Beidleman et al. 1986) were not used in this analyses since the data was not comparable. In addition to the above mentioned sites, other sites that contain comparable data were included in the different levels of inter-site analysis. These sites included the black occupation of the Dickson site—referred to as the Dickson II site (Catts, Hodny and Custer 1989), the Grant Tenancy site (Taylor et al. 1987), the Heisler Tenancy site (Catts, Hodny and Custer 1989), the Allen site (Basalik et al. 1988), Lots 304 and 306 King Street (Berger and Associates, Inc. 1985), and the Fischer site (Hurry 1982).

The following discussion presents a summary description of each of the sites used in the comparisons. For further site specific information, reference should be made to the original publications.

The Hawthorn site was a nineteenth century owner-occupied farm, consisting of 111 acres. The occupants of the Hawthorn site were wealthy white farmers ranking in the upper four to twelve percent of the taxable local population through time (Coleman et al. 1984).

The Williams site investigations in Glasgow, Delaware revealed a black laborer occupation (Sidney Stump). The archaeological information, along with the archival research of Sidney Stump's ownership of the property, revealed the relatively low socio-economic status of the site occupants (Catts and Custer 1990). This period will be referred to as the Williams II occupation within this analyses.

The Dickson II house, a tenant dwelling located near the village of Christiana, Delaware, was inhabited by a black family clearly of the lowest social station within the black community, relying on rag picking for income and wild game for much of the family's diet (Catts, Hodny and Custer 1989).

The Grant Tenancy site was an early nineteenth century tenant site in Stanton, Delaware. Based on ceramic comparison and faunal analysis, the site appeared to have been occupied by individuals of a higher economic status (Taylor et al. 1987).

The Heisler Tenancy site near Christiana, Delaware was owned by William Egbert Heisler, a prominent white landholder in the mid-nineteenth century. The site was occupied by white tenants from the 1850's to 1887 and was black owner occupied from 1887 to the 1940's (Catts, Hodny and Custer 1989).

The Ferguson site, located between Newark and Ogletown, Delaware, was tenant occupied during the nineteenth century. The economic status of the white inhabitants at this site was unattainable due to lack of sufficient evidence to draw any clear conclusions (Coleman et al. 1983).

The Allen site was tenant house located within the Lewden-Allen farm complex in Christiana, Delaware. Documentary evidence indicated a possible black occupation of the tenant house during the latter part of the nineteenth century. The site contained high-status artifact and faunal remains. Basalik et al. (1988) concluded that the high status remains more accurately reflected the lifeways of the wealthy white family inhabiting the adjacent Lewden-Allen farm complex of which the Allen tenant site was part. The upper strata of the tenant house addition contained large amounts of bottle glass dating to the second half of the nineteenth century, with a concentration to the last quarter of the nineteenth century, provided a temporal association with the glass vessel analysis of the Cazier site.

During 1880 through 1900, lots 304 and 306 of King Street in Wilmington, Delaware, housed middle class, small scale entrepreneurs and their families. The privy, shared by the occupants of the two buildings, contained large amounts of kitchen refuse located in the night soils (Berger and Associates, Inc. 1985). The ceramic and glass vessel functions of lots 304 and 306 were used for temporal comparisons with the ceramic and glass excavated from the Cazier site, as well as the glass from the Allen site.

The Howard-McHenry site was a tenant occupied mill, that contained the mill, as well as two domestic structures and a stable. The mill was a small-scale country enterprise in operation until the 1860's or 1870's near Pikesville, Maryland. The mill was owned by well-to-do, socially well-connected white men—Cornelius Howard and James McHenry. Through documentary evidence much was known about the two owners, but very little was known about the tenants (Hurry and Kavanagh 1983).

The Fischer site was a post-bellum black residence in Anne Arundel Country, Maryland. The house was built of hewn logs in the 1880's, designed to house tenants or farm laborers working on the Benjamin Lusby farm (Hurry 1982). The Phase II investigation of the Fischer site limits comparisons with the Cazier site to architectural comparison between the two black occupied tenant structures.

ARCHITECTURAL COMPARISONS

Archaeologists have used architectural comparisons as one way to determine the socio-economic status of the sites' inhabitants. Archaeological information about structures is often the only information available on the social ranking of a site's occupants. The Cazier site dwelling and outbuildings were compared to several other excavated house sites in the area. All of the structures compared were contemporary, dwellings of either tenant or owner occupancy, both black and white, and in both urban and rural settings. Table 24 compares the first floor dimensions

TABLE 24

First Floor Dimension Comparisons from Archaeological Sites in the Mid-Atlantic Region

SITE	TIME PERIOD	OCCUPANT STATUS	DIMENSIONS IN FEET	AREA
Hawthorn (7NC-E-46)	1738-1960	Owner	Original log 29 x 21 Frame addition 12 x 21 Frame kitchen 12 x 17	609 sq. ft. 252 sq. ft. 204 sq. ft. **TOTAL 1065 sq. ft.**
Wilson-Slack (N-6-269)	1859-1983	Owner	32 x 30	**960 sq. ft.**
Temple House (7NC-D-68)	c. 1830-1955	Tenant	Original frame 26 x 20 Frame addition 16 x 20	520 sq. ft. 320 sq. ft. **TOTAL 840 sq. ft.**
Ferguson House (N-3902)	1837-1955	Tenant	16 x 24 Addition 18 x 15	384 sq. ft. 270 sq. ft. **TOTAL 654 sq. ft.**
Williams II / Stump (7NC-D-130)	1845-1930	Owner*	27 x 17	**459 sq. ft.**
Cazier Tenancy (7NC-F-64)	**1844-1935**	**Tenant***	**17 x 17** **West addition 17 x 9**	**289 sq. ft.** **153 sq. ft.** **TOTAL 442 sq. ft.**
Dickson II (7NC-E-82)	1845-1919	Tenant*	18 x 22	**392 sq. ft.**
Grant Tenancy (7NC-B-6)	c. 1830-1941	Tenant	16 x 15.5 East addition 6 x 16.5	248 sq. ft. 93 sq. ft. **TOTAL 341 sq. ft.**
Heisler Tenancy (7NC-E-82)	1850-1887 1887-1940	Tenant Owner*	12 x 21	**252 sq. ft.**
Fischer Site	c. 1880-1920	Tenant*	16 x 12 Shed addition 5 x 12	192 sq. ft. 60 sq. ft. **TOTAL 252 sq. ft.**

* Black occupied

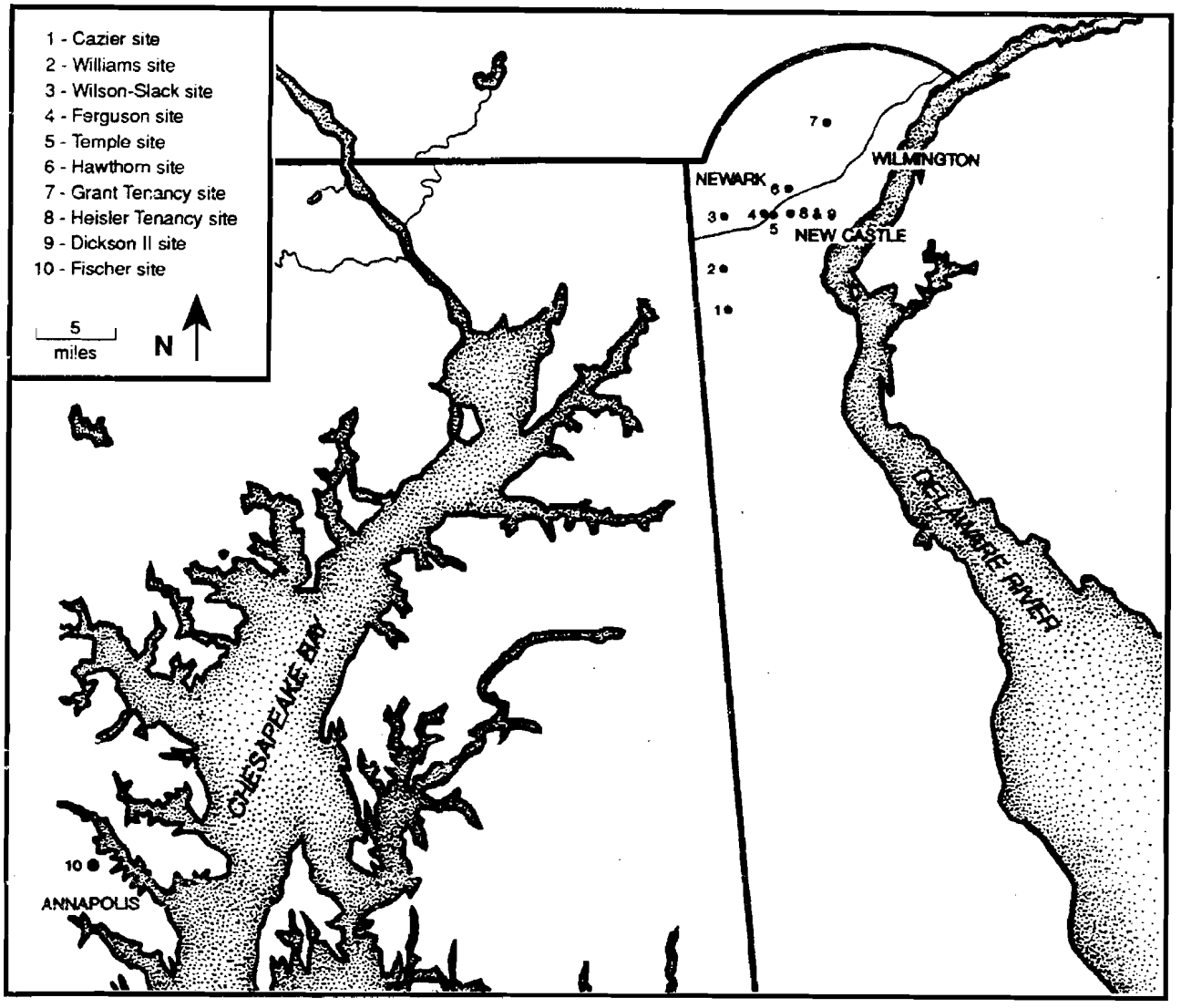
and total floor space available, including any additions to the structures. The nine houses compared with the Cazier site dwelling included three owner occupied sites: the Hawthorn House (Coleman et al. 1984), the Wilson-Slack House (Coleman et al. 1985), and the Stump occupation of the Williams House (Catts and Custer 1990). The tenant occupied houses used in this analysis included: the Temple House (Hoseth et al. 1990), the Ferguson House (Coleman et al. 1983), the Dickson II House (Catts, Hodny and Custer 1989), the Grant Tenancy House (Taylor et al. 1987), the Heisler Tenancy House (Catts, Hodny and Custer 1989), and the Fischer House (Hurry 1982) (Figure 35). Six of the dwellings (Hawthorn, Temple, Ferguson, Grant, Fischer, and Cazier) contained the structural remains of additions.

Bernard Herman's research on nineteenth century tenant houses in the Lower Delaware Valley indicated that tenant structures were generally smaller, not as valuable, and less substantially constructed than owner-occupied structures. Generally, tenant houses ranged in size from 380 to 490 square feet (Herman 1987a:64, 1987b; Stiverson 1977). Houses with more than 490 square feet of living space were considered to be large houses usually associated with owner-occupied sites.

Recent examinations of nineteenth century reform literature dealing with slave cabins and surveys of standing slave cabins in Virginia provided useful architectural information about dwellings built by whites, but inhabited by African Americans (Breeden 1980; McKee 1992; Herman 1984). The characteristics of well-constructed, single-family slave quarters included cabins built of weatherproofed logs, measuring 16' x 18' and elevated two to three feet

FIGURE 35

Location of Sites Used in Architectural Comparisons



above the ground for ventilation and cleanliness, with a shingle roof, plank flooring, brick chimney, and sufficient windows (Breeden 1980:115). A few planters felt that brick was a preferable construction material and stoves would consume less wood than chimneys. These characteristics, among other recommendations, were discussed in numerous slave management journals written by slave owners, planters, and agricultural reformers in the first half of the nineteenth century. The occupants of these cabins were not consulted for their opinions about construction, size, convenience, crowding or hygiene.

Southern planters weren't the only group constructing one-room quarters during the nineteenth century. The Anglo-American building tradition of one-room or hall plan was one of the major building types in the eastern and southern United States from the seventeenth century onwards (Herman 1984:267). Labor class dwellings of the late eighteenth and nineteenth century were of similar construction as southern slave quarters. An 1834 monograph describing labor class housing indicated that the cottages were single rooms, measuring 18' x 14' or 15' (Herman 1984).

Several observations were made based on house dimensions, ranked in Table 24 from the largest to the smallest house. Herman (1987b) stated that for the housing stock of the Lower Delaware Valley, the dimension of 490 square feet of living space was a dividing point between large and small houses. All of the dwellings that had less that 490 square feet of first floor space in this comparison were tenant occupied, with the exception of the Williams II house.

Three of the five black occupied houses (Williams II, Cazier, and Dickson II) were very similar in size, ranging from 392 to 459 square feet. The Fischer House and the Heisler Tenant House was much smaller in size (252 square feet) than the other black occupied houses listed above. All five of these sites clearly fell at the lower end of the scale for all housing stock.

Herman (1987a) suggested that two categories of tenant houses existed: the farm manager, whose house was larger and more substantial, and the resident laborer, whose house would be smaller and ephemeral. The Temple House, although larger than any of the compared tenant houses, was occupied by a farm manager working for absentee landowners. The Cazier house was occupied by resident laborers (two known black laborers) and was smaller, but built of the same brick as the Cazier Mansion. Henry Cazier built the house near the entrance to the lane leading to his mansion for use by a servant or tenant family. Perhaps Cazier, being a well-read individual, adopted some of the construction methods described in agricultural reform journals of day. Perhaps he read the 1834 labor class housing monograph (Herman 1984) or even read the journal containing the advice of a planter/physician from Mississippi "One sixteen or eighteen feet square is not too large for a man and a woman and three or four small children..." (Breeden 1980:120). Although the dwelling was made of the same brick as his mansion house, Cazier planned this house to measure 17' x 17' square. This "gate-house" was the first feature of Cazier's grand estate that guests would see before they passed through the nearby wooden gates or the lane that led to his mansion. Like the cabins built in the south by planters for their slaves, the Cazier site dwelling reflected the status of Henry Cazier, rather than the status of the occupants of the dwelling.

Herman (1987a) stated that tenant sites generally lacked substantial outbuildings, which would instead be located at the main farm. Archaeological evidence of one, possibly two small outbuildings and two privies at the Cazier site supported this theory. The yard area was less than one quarter of an acre. All outbuildings, such as barns, stables, sheds, dairies and smokehouses necessary for the large farming operations of Cazier's acreage were at the main farm located less than one quarter of a mile from the tenant house. In comparison, the owner occupied Wilson-Slack complex consisted of numerous outbuildings (a blacksmith shop, granary, chicken house, barn, machine shop/grist mill, and one unknown structure) located on a two acre property. The other white owner occupied property, the Hawthorn site, located on a 111 acre tract, consisted of a barn, milkhouse, granary and shed, corn crib, six chicken houses, a toolshed, and a woodbox.

With the exception of the Temple site, the tenant occupied sites revealed a decrease in number of outbuildings compared to the owner occupied sites. Excavations at the farm manager occupied Temple site revealed the remains of a house, and six (possibly seven) outbuildings, a well, and two privies. The Ferguson site contained the remains of two outbuildings, as did the Grant Tenancy site. No outbuildings were found at the Dickson II site. One outbuilding, used for storage of root crops, was present at the Fischer site. Although Phase II testing at the Heisler Tenancy site revealed no structural features associated with outbuildings, historical documentation listed outbuildings present on the property.

The comparison of the Cazier site dwelling with other archaeological sites demonstrates that a relative ranking of dwelling size can be conducted using archaeological information about structures. The analysis can provide one indication of the relative socio-economic status, and perhaps even ethnicity, of the site's inhabitants. The dwelling size ranking should not be used alone to determine economic status and ethnicity, but instead be used in conjunction with archival documents, ethnographical information, and artifact analyses.

VESSEL FUNCTION ANALYSIS

The Cazier site's reconstructed ceramic vessels from Feature 32 (Cellar), Feature 170 (nineteenth century privy), and Features 37, 37A, and 65 (Trash Midden) were analyzed according to several functional categories. Significant differences in functional distribution reflect important changes in domestic economy. The categories were then compared and contrasted with other assemblages to distinguish general trends and characteristics of vessel use and function (Otto 1984; Kelso 1984). Vessel form frequencies identified diachronic and spatial differences in lifestyles between social and economic classes (Kelso 1984). The purpose of this study, in accordance with the state historical archaeological management plan (De Cunzo and Catts 1990), was to look at household social and economic strategies and then to place the households into their communities and cultures.

TABLE 25

Percentage Values and Vessel Frequencies

	CAZIER	TEMPLE	WILLIAMS II	DICKSON II	HEISLER	KING
Flatware	33 (28%)	13 (31%)	91 (37%)	14 (29%)	108 (38%)	9 (41%)
Hollowware	85 (72%)	29 (69%)	153 (63%)	34 (71%)	173 (62%)	13 (59%)
Preparation / storage	13 (65%)	12 (21%)	88 (36%)	13 (29%)	28 (18%)	1 (33%)
Serving	7 (35%)	44 (79%)	156 (64%)	32 (71%)	132 (83%)	2 (67%)
Cups	10 (77%)	3 (100%)	13 (87%)	10 (100%)	60 (97%)	7 (100%)
Mugs / jugs	3 (23%)	0 (0%)	2 (13%)	0 (0%)	2 (3%)	0 (0%)

Note: Percentages reflect the frequency of flatware to hollowware, preparation / storage to serving, and cups to mugs / jugs at each site.

Values represent total vessels recovered from the given site.

The categories compared were flatwares to hollowwares, serving vessels to storage/preparation vessels, and cups to ceramic mugs and jugs. At most residential sites, the flatware/hollowware ratio was indicative of food consumption and dietary patterns. Flatwares include plate, saucer, and platter forms associated with the serving and consumption of foods. The hollowware forms (more versatile than flatwares) represented in the comparisons included bowls, baking dishes, pots, jugs, mugs, tea cups, tea pots, tureens, and butter pots. Higher proportions of flatwares suggested a greater household investment in tablewares and a diet that included prime meat cuts, such as steaks and roasts. Higher proportions of hollowware suggested a diet of less expensive soups, stews, and porridges. Thus, in this comparison a higher percentage of flatwares was assumed to represent a higher social or economic status for the site's inhabitants.

Regional historical archaeological sites, with similar occupation dates, functions, and/or ethnic group, and comparable data chosen for use in the ceramic vessel analysis included the Temple site (Hoseth et al. 1990), the Williams II site (Catts and Custer 1990), The Dickson II site (Catts, Hodny and Custer 1989), the Heisler site (Catts, Hodny and Custer 1989), and Lots 304 and 306 King Street excavations in Wilmington, Delaware (Berger and Associates 1985).

When comparing the vessel assemblages among different archaeological sites, it is important to systematically compare the frequencies of the vessel types among all sites to correctly assess their similarities and differences. In order to avoid underestimating assemblage variability, a difference-of-proportion test (Parsons 1974:445-449) was applied to paired combinations of the sites for each of the vessel categories.

Research at African-American archaeological sites (Deetz 1977; Otto 1984; Baker 1980) has suggested a distinctive pattern of ceramic use at black occupied sites, consisting of the presence of serving bowls exceeding 40 percent of the artifact assemblage. By examining sites with the temporal range of the nineteenth century and comparing artifact categories from known black occupations, as well as white-occupied sites the hypothesis of an existing universal African American pattern was addressed by the ceramic assemblage recovered from the Cazier site.

Table 25 lists the percentage values and vessel frequencies used in the comparison, and Table 26 shows all of the test statistics for each of the paired site comparisons for each paired vessel category. Test statistic values greater than 1.96 indicated that a significant difference-of-proportion existed for those categories. Table 27 shows rankings of the sites for each vessel form category and Table 28 shows the frequencies of significant similarities among each pair of sites; higher values indicate sites that are most similar. Out of 84 pair-wise comparisons, approximately 20 percent exhibited significant differences.

TABLE 26

Ceramic Vessel Form Comparisons

Difference-of-Proportion Tests

CAZIER	KING	HEISLER	DICKSON II	WILLIAMS II (STUMP OCCUPATION)	TEMPLE
Flatware	1.22	2.00*	0.16	1.75	0.37
Hollowware	1.22	2.00*	0.16	1.75	0.37
Storage / prep.	1.05	4.78*	2.74*	2.56*	3.56*
Serving	1.05	4.78*	2.74*	2.56*	3.56*
Cups	1.38	2.61*	1.63	0.67	0.92
Mugs / jugs	1.38	2.61*	1.63	0.67	0.92
TEMPLE					
Flatware	0.80	0.93	0.18	0.79	
Hollowware	0.80	0.93	0.18	0.79	
Storage / prep.	0.48	0.65	0.86	2.10*	
Serving	0.48	0.65	0.86	2.10*	
Cups	--	0.32	--	0.67	
Mugs / jugs	--	0.32	--	0.67	
WILLIAMS II (STUMP OCC.)					
Flatware	0.34	0.27	1.07		
Hollowware	0.34	0.27	1.07		
Storage / prep.	0.10	4.03*	0.93		
Serving	0.10	4.03*	0.93		
Cups	1.10	1.58	1.20		
Mugs / jugs	1.10	1.58	1.20		
DICKSON II					
Flatware	0.97	1.23			
Hollowware	0.97	1.23			
Storage / prep.	0.16	1.69			
Serving	0.16	1.69			
Cups	--	0.58			
Mugs / jugs	--	0.58			
HEISLER					
Flatware	0.23				
Hollowware	0.23				
Storage / prep.	0.71				
Serving	0.71				
Cups	0.48				
Mugs / jugs	0.48				

* Significant difference-of-proportion

TABLE 27

Rankings of Sites by Ceramic Vessel Form Categories

FLATWARE	HOLLOW	STORAGE/ PREPARATION	SERVING	CUPS	MUGS/ JUGS
King	**Cazier**	**Cazier**	Heisler	Dickson II	**Cazier**
Heisler	Dickson II	Williams II	Temple	King	Williams II
Williams II	Temple	King	Dickson II	Temple	Heisler
Temple	Williams II	Dickson II	King	Heisler	Dickson II
Dickson II	Heisler	Temple	Williams II	Williams II	Temple
Cazier	King	Heisler	**Cazier**	**Cazier**	King

TABLE 28

Summary of Significant Similarities Among Ceramic Vessel Form Comparisons

	KING	CAZIER	TEMPLE	WILLIAMS II (STUMP OCC.)	DICKSON II
CAZIER	--				
TEMPLE	4	1			
WILLIAMS II (STUMP OCC.)	3	2	4		
DICKSON II	5	1	5	4	
HEISLER	5	--	5	2	4

*Maximum value is 6

The Cazier ceramic vessel assemblage was expected to resemble the vessel assemblages of sites with equivalent status and ethnic group. However, Cazier was the least similar of all sites compared (Table 29). The Cazier ceramic assemblage was similar to only three of the six sites (the Temple, Dickson II, and Williams II sites; Table 30). The assemblage from the privy at 304 and 306 King Street was very similar to all the sites, except for the Cazier site.

TABLE 29

Percentage Values and Vessel Frequencies

	CAZIER 1850 - 1925	304 & 306 KING STREET 1880 - 1900 FEATURE 10	ALLEN SITE 1850 - 1900
Beverage	28 (24%)	4 (4%)	49 (50%)
Food	36 (30%)	4 (4%)	27 (27%)
Medicinal	25 (21%)	35 (35%)	22 (22%)
Household	30 (25%)	58 (57%)	1 (1%)
Alcoholic beverage	18 (64%)	0 (0%)	9 (18%)
Non-alcoholic beverage	10 (36%)	4 (100%)	40 (82%)
Drinking	8 (22%)	21 (84%)	0 (0%)
Beverage	28 (78%)	4 (16%)	49 (100%)
Drinking	8 (57%)	21 (91%)	0 (0%)
Tableware	6 (43%)	2 (9%)	0 (0%)

TABLE 30

Glass Vessel Comparisons, Difference-of-Proportion Tests

CAZIER	ALLEN	KING
Beverage	3.99*	4.10*
Food	0.48	5.04*
Medicinal	0.22	2.26*
Household	5.09*	4.86*
Alcoholic beverage	4.06*	2.42*
Non-alcoholic beverage	4.06*	2.42*
Drinking	3.47*	4.75*
Beverage	3.47*	4.75*
Drinking	--	2.44*
Tableware	--	2.44*

ALLEN	KING
Beverage	7.30*
Food	4.55*
Medicinal	1.95
Household	8.75*
Alcoholic beverage	0.94
Non-alcoholic beverage	0.94
Drinking	7.58*
Beverage	7.58*
Drinking	--
Tableware	--

* = significant difference of proportion

Specifically in the flatware/hollowware comparison the Cazier site tenants discarded a low proportion of flatwares, a pattern not identified in the other assemblages. Note that this pattern was clearly reflected in the difference-of-proportion results, but not reflected by the straight percentage values (Table 29). The corresponding high proportion of hollowwares discarded by the Cazier tenants was similar to the discard pattern observed at the Dickson II, Temple, and Williams II sites. A low proportion of flatwares to hollowwares at tenant occupied and black owner occupied sites, was reflected in this analysis, probably indicating the sites' occupant consumption habits and generally lower economic status.

TABLE 31

Ranking of Sites by Glass Form Categories

BEVERAGE	FOOD	MEDICINAL	HOUSEHOLD	ALCOHOLIC	NON-ALCOHOLIC
Allen	Cazier	King	King	Cazier	King
Cazier	Allen	Allen	Cazier	Allen	Allen
King	King	Cazier	Allen	King	Cazier

DRINKING	TABLEWARE
King	Cazier
Cazier	King

DRINKING	BEVERAGE
King	Allen
Cazier	Cazier
Allen	King

TABLE 32

Summary of Significant Similarities Among Glass Vessel Forms

	CAZIER	KING
KING	0	
ALLEN	1	3

*Maximum value is 10

A higher frequency of storage/preparation to serving vessels was expected at the Cazier site due to its rural location; this proportion was observed within the Cazier ceramic assemblage. When the storage/preparation versus serving vessels were compared between the assemblages, once again the Cazier site was anomalous. The Williams II, King Street, and Dickson II assemblages exhibited similar frequencies of storage/preparation vessels, and Temple was similar to Heisler. Based on serving vessels, Cazier and Williams did not compare to each other or any other site. In sum, the rural Cazier site assemblage had a higher proportion of storage/preparation to serving vessels. The opposite proportion was observed at Dickson II, Heisler, Williams II, and Temple sites and the urban King Street site. The Cazier site was the most isolated of the four rural sites, which may account for the high proportion of storage\preparation type vessels.

The ranking of sites based on cups versus mugs and jugs indicated that Cazier had a low frequency of cups and corresponding high frequency of mugs and jugs, compared to other sites. Cazier was similar to Williams II in the mugs and jugs category, but did not show any similarities to other sites based on cup frequencies. The high proportion of mugs/jugs to cups is a trend associated with the site occupants' low economic status.

Recently, historical archaeologists have recognized the importance of analyzing bottle assemblages (Baugher-Perlin 1982:259-260). Not only do bottles provide data for studying chronology, but shape analysis can determine a bottle's function. By the second half of the nineteenth century, the use of bottles as storage containers began to replace ceramic bottles and jugs. Recent work in Wilmington, Delaware revealed that in urban sites, bottle glass was more frequently used than ceramics after 1870 (LeeDecker et al. 1987:250-252). Garrow (1982:185-186) suggested that as the nineteenth century proceeded, bottle manufacturing technology improved, resulting in lower bottle costs. As glass became less expensive and more available due to improvements in the manufacturing process, continued re-use became unnecessary, increasing the amount of glass found on late-nineteenth and twentieth century sites.

A variety of glass containers, other than bottles, were found in great proportions at historical sites. Functional differences were readily apparent in drinking glasses. Glass tableware, serving vessels, and decorative items were as common as ceramic vessels of the same function in households of the late nineteenth and twentieth centuries. The addition of glass containers created problems in vessel function analysis of late-nineteenth and twentieth century archaeological sites, particularly if a large portion of the vessel assemblages were glass not considered in the analysis along with ceramic vessels (Catts and Custer 1990; Hoseth et al. 1990).

In order to address the changing consumption habits of the late nineteenth century, a second series of difference-of-proportion tests were executed, using the abundance of glass bottles and vessels excavated from the Cazier site. This was accomplished by comparing and contrasting the Cazier site's glass vessel assemblages, vessel use and function, with local historical archaeological sites with similar occupation dates and comparable artifact information. The sites chosen for this analysis include the Allen site (Basalik et al. 1988) and Lots 304 and 306 King Street in Delaware (Berger and Associates 1985).

This analysis investigated the ratios of specific glass vessel functions including beverage containers, food containers, medicinal bottles, and household items. Additionally, alcoholic beverage bottles were compared with non-alcoholic beverage bottles. The ratio of drinking containers to beverage containers were compared, as well as drinking containers to tableware items. The percentage values and vessel frequencies used in the comparison are listed in Table 29, and Table 30 lists the test statistics for each of the paired site comparisons for each paired vessel category. As with the ceramic analysis, test statistic values greater than 1.96 indicated a significant difference-of-proportion. Twenty-one significant differences between functional categories were observed, out of a possible 26 pairings.

Table 31 shows the similarities and differences between the glass assemblages by ranking the sites with respect to each vessel function category. Table 32 shows the frequencies of significant similarities among each pair of sites; higher values indicated sites that were most similar. Three similarities were observed between the King and Allen assemblages; the categories included medicinal, alcoholic bottles and non-alcoholic bottles. Cazier shared only one similarity with the Allen site, in the food container category. The three compared sites did not show any similarities to each other in the beverage, household, drinking, and tableware function categories.

Although the data base for this analysis was very small, consisting of only three sites, some observations could be made. The three sites compared included one rural site (Cazier), one urban site (Lots 304 and 306 King Street) and one village outskirt site (Allen). The difference-of-proportion test clearly revealed the distinctiveness of each site based on their glass vessel discards. The test provided ten possible comparison opportunities, and only four categories showed similarities between the sites. Of the four similarities, three were between King Street and Allen. Cazier was similar to Allen in the food container category only and did not show any similarities with King Street. One tentative conclusion based on this analysis was that differences in the social relationships and activities of rural and urban dwellers in Delaware during the late-nineteenth and early-twentieth centuries can be observed by studying the glass vessel remains. This analysis indicates that when the glass vessel assemblages of urban, village and rural sites are compared, the village and urban sites are more similar.

CONCLUSIONS AND FUTURE RESEARCH DIRECTIONS

The results of the data recovery excavations at the Cazier site contributed to the understanding of tenant life in rural Delaware in the nineteenth and twentieth centuries. More specifically, the changing disposal patterns,

consumption habits, spatial utilization, and material culture processes of black laborers and their families were revealed in the archaeological record. Each of these processes related to two primary research domains within historical archaeological research in the Upper Peninsula zone, Domestic Economy and Landscape (De Cunzo and Catts 1990). These research domains will in turn yield data significant to current historical and archaeological research in the Industrial and early urbanization Period, 1830-1880 +/- and the urbanization and Early Suburbanization Period of 1880-1940 defined by Ames et al. (1989:30-37).

The research program proposed in the Management Plan for Delaware's Historical Archaeological Resources (De Cunzo and Catts 1990) emphasized the importance of understanding the phenomenon of tenancy in all the geographic, environmental, occupational, socioeconomic, ethnic, and temporal variability. The Cazier site spanned a critical period of change in nineteenth and early twentieth century Delaware. The development of strong regional urban markets beginning in the 1840s brought tremendous social and economic change to Delaware and the Mid-Atlantic region.

The opening of the Chesapeake and Delaware Canal in 1829 and the construction of Delaware's first railroad in 1832, the New Castle and French Town Railroad, were key events in these social and economic changes. Improved transportation brought new commercial opportunities to expanding urban markets. Located in the Upper Peninsula grain region, Pencader farmers, including Henry and Jacob Cazier, benefited from the proximity of the extensive road networks, the canal, and the many rail lines. The farms were large, cultivating an average of three times (150 acres) more acreage per farm than the other regions of the state (Herman et al. 1989:31). Gentleman farmer/scientific agriculturists, such as Henry and Jacob Cazier, evolved into agrarian capitalists. In certain areas of the Upper Peninsula Zone, the economic and social power of the landed few produced tenancy rates as high as 80 percent (Herman et al. 1989:33). Tax assessments of 1856 reported that Henry Cazier owned eight properties in Pencader Hundred, a total of 1,200 acres of land. The Cazier site (7NC-F-64) was one of these tenant properties.

Henry and Sarah Cazier were prominent landowners in Pencader Hundred. Most of the land was inherited from Henry's great-great-grandfather Mathias Van Bibber, one of the early Dutch settlers of Delaware. A large property north of the Chesapeake and Delaware Canal, "White Hall", was the home of Henry Cazier. Cazier himself aided in the construction of the canal and made a sizable profit in the process. The Caziers were members of the Pencader Presbyterian Church by 1833. Cazier's substantial donations to the rebuilding fund led to the construction of the new Presbyterian Church, following the destruction of the original church by fire in 1852. He served as a Ruling Elder of the Board of Trustees of the church he helped to rebuild.

It was during this time of agricultural reform and changing markets, that Henry Cazier built his mansion, Mount Vernon Place. Cazier's mansion became the showplace of Pencader Hundred (Cooch 1936). Formal balls and garden parties were held in the splendor of the mansion and grounds. The elite of Delaware, including doctors, lawyers, politicians, and governors, attended these functions. While constructing Mount Vernon Place in 1844, Cazier built a small brick house at the entrance to his mansion at the junction of Glasgow-Summit Bridge Road (Route 896) and the entrance to the lane that led to his mansion. The tenants of this house, the Jacob B. Cazier Tenancy site, were required to open and close the big wooden gates of Cazier's entrance lane as part of the rental agreement. The small (17' x 17') gate-house was built of the same brick that formed the walls of the mansion. The size and construction of the house was in accordance to other servant quarters of the time. Cazier carefully designed and constructed the house to reflect his position in the community. The small yard was fenced all around, perhaps required to be kept neat and tidy. Cazier knew that the gate-house would be the first feature of his estate visible to travelers from Glasgow Road (Route 896). The house was thus a reflection of the status of Henry Cazier, not of the occupants.

Henry Cazier died in 1859, leaving his wealth, land, and mansion to his son, Jacob B. Cazier. Jacob was 26 years old, considered himself to be a gentleman farmer, and continued to add to his father's landholdings. The same concern for appearance and the visual impact of his estate led Jacob Cazier to carefully maintain his tenancy.

By the agricultural census of 1880, farm values had dropped to their 1850 levels. Nationwide financial panic in 1873 affected regional urban markets. The Depression years of the 1890's and 1930's disturbed the local landholding patterns of the area, resulting in the diversification of land ownership and the reallocation of property (Herman et al. 1989:35). These regional economic changes were reflected in the land holdings of the Cazier family. Tax assessments

of 1881 listed 1,225 acres in the possession of Jacob B. Cazier. But one year later, in 1882, the Delaware State Directory reported 9,908 acres belonging to the Kirkwood area farmers. J.B. Cazier owned almost one third of those acres, suggesting that Cazier benefited from the economic decline during the late nineteenth century. Jacob refurbished the mansion and the gardens in 1878. He continued to hold elegant balls and garden parties, as his father had done. A black laborer, Nicholas Stevenson, originally from Hampton, Virginia, was hired during the late 1880's to drive Cazier's carriage and to take care of the horses. Stevenson, his wife, and four of his children lived in the small gate-house. Mary Stevenson took care of the children and gardened, while Nicholas worked at the mansion.

The first decades of the twentieth century were not profitable years for Jacob Cazier. His carriage driver bought a small piece of land nearby in the 1910's, and worked as a laborer for other local farmers. Cazier sold off a number of farms and tracts of land, so that by the time of his death in 1918, his real estate holdings had diminished to 1,030 acres. Mount Vernon Place and the surrounding farmland was left to his daughter, who rented it to the Richard Biddle family.

No longer needed as a status symbol for the wealthy Cazier family, the gate-house was abandoned for a few years. The need for more tillable acreage in the 1930's caused the "shrinking" of the gate-house yard, from 600 square feet to 200 square feet. The small yard was well suited for the occupants of the tenant house during the twentieth century. Rudolf Stevenson and his wife were day laborers and had no children.

The advent of the automobile and accompanying road improvements caused the demise of the small, brick house in 1935. The state of Delaware bought the house and demolished it because the widening of Route 896 threatened the safety of the residents.

Absolute evidence concerning the function of the Cazier site dwelling as a gate-house/tenant house was well documented in the historical record. Information regarding the landowners, Henry and Jacob Cazier, was gained from tax assessments, state directories, town directories, population censuses, deed records, wills, photographs, written histories of the state of Delaware, and oral documentation.

Archival information regarding the tenants of the gate-house, however, was sparse. Tenants, if mentioned at all, were listed as either day laborers or tenants—no names were given. Despite the extent of the documentary record of the nineteenth century in comparison with earlier periods, the paucity of documented information about tenants has been recognized by archaeologists in the region (Taylor et al. 1987; Coleman et al. 1983; Catts and Custer 1990; Hoseth et al. 1990; and De Cunzo et al. 1992). The value of studying sites with recent occupation periods, such as the Cazier Tenancy site (1844 to 1935), has recently been recognized in several studies (Adams 1976, 1977; Askins 1985; Beaudry and Mrozowski 1987; Branstner and Martin 1987; Davidson 1982; Henry 1987a, 1987b). The Management Plan for Delaware's Historical Archaeological Resources (De Cunzo and Catts 1990) suggested that late period archaeological sites have important research potential and information value. Consideration of material evidence, such as architecture, landscape, and archaeological artifacts, provided supplementary, complementary, and alternative insights into daily life, cultural values and beliefs, social group identification and interaction, production processes and distribution networks (De Cunzo and Catts 1990:160).

Written and oral documentation revealed at least three tenant occupations of Cazier's gate-house. The first resident of the brick house acted as a gate-keeper for Henry Cazier. If gate-keeping was his only means of support was not evident. Architectural remains of the dwelling included a brick foundation, cellar, and bulkhead entrance. Based on unit excavations, the cellar fill was determined to be secondary refuse from the demolition of the house in the 1930's. The fill was a mixture of nineteenth and twentieth century artifacts that could not represent any single occupation.

Architectural alterations of the gate-house and the landscape were made by the tenants between 1844 and 1880. Oral documentation verified the archaeological evidence of a covered wooden porch was constructed over the bulkhead entrance on the south side of the house after 1865. Based on archaeological structural post remains, a wooden addition was made to the west side of the house. A small outbuilding, represented by structural post features, was constructed 30 feet west of the house. This building and adjacent privy, were separated from the inner active yard area and the dwelling by a central fenceline. The earliest privy (Feature 170) was located approximately 50 feet northwest of the house along the northern and western fenceline. The outer active yard was defined by northern, western, and southern fencelines that created a total yard area of 600 square feet. No deep, sealed features were

excavated that yielded undisturbed archaeological assemblages associated with the earliest tenants. The household refuse was probably deposited in the shallow trash midden (Features 37, 37a and 65), or in sheet middens identified by the high artifact density area north of the house that were later disturbed by plowing.

The tenants of the gate-house during the period from the late 1880's to the early 1910's did not substantially alter the earlier spatial pattern of the site. Nicholas Stevenson, listed in the 1890 census as a black, day laborer, was the horseman and carriage driver for Jacob Cazier. Mr. Stevenson worked at the mansion grounds and did not need extensive storage for equipment or machinery. The one outbuilding present on the tenant property would was enough storage for gardening tools or a few animals. Mrs. Stevenson and her daughters maintained a garden outside the fenceline, behind the privy area. It was unclear as to when the western addition to the brick house was constructed. It could have been built prior to the Nicholas Stevenson occupation, but the large size of his family suggested that the addition was a necessity. The function of the dwelling as Jacob Cazier's gate-house and its proximity to Glasgow-Summit Bridge Road (Route 896) governed the spatial pattern of the site during the late nineteenth and early twentieth centuries. The house and outbuildings would have probably been kept in good repair, to impress Jacob Cazier's visitors. The yard was also kept neat as part of Cazier's interest in appearances. Garbage would have been discarded north or west of the house, because the well and Route 896 were located east of the house and the tree-lined lane leading to the mansion was south of the house. Plow zone artifact distribution maps revealed high densities of all artifact types north and south of the northern fenceline.

The temporary abandonment of the tenant house from circa 1915-1925, generated the most dynamic changes in "yardscape". The less substantial wooden addition of the house, the outbuilding, and privy fell into disrepair, were torn down and removed. The farmland surrounding the fenced yard of the nineteenth century tenants expanded, leaving a small yard area for the new occupants of the house. A new privy was placed just ten feet from the northwest corner of the house. Rudolf Stevenson (nephew of Nicholas Stevenson) and his wife maintained a small garden north of the wire fence encompassing their small yard and house. Any archaeological remains of other twentieth century tenants, other than the privy (Features 36 and 173), were used as cellar fill, after the demolition of the house in 1936.

The minimum ceramic vessel function comparisons between the Cazier site and four rural tenant occupied sites in the region, the Temple, Williams II, Dickson II and Heisler sites, and one urban site, Lots 304 and 306 King Street, revealed that the Cazier site was unique among these sites. Vessel function and form analyses of the Cazier ceramic assemblage indicated that economic and ethnic factors were important in determining overall vessel assemblage trends. The black tenants of the Cazier site used more hollowwares than flatwares and more mugs/jugs than cups. These two patterns have been attributed to other poor and black occupations and probably reflect economic as well as ethnic factors. The range of vessel forms at the Cazier site, however, included platters tureens, tea pots, and other specialized serving wares not typically associated with black tenant sites.

One reason for the presence of specialized table wares at the Cazier site may have been the tenant's close association with the Cazier family. The black tenants of the gate-keeper's house appear to have enjoyed a relatively high level of material comfort more associated with their improved economic status than ethnicity.

Analysis of bottle function and form, however, was not as conclusive as the ceramic analyses. Rural sites, including the Cazier site, tended to have more food and beverage bottles than urban sites in nearby Wilmington and Christiana. These differences do not appear to be related to ethnic or economic factors. Rather, a higher incidence of bottle recycling and reuse in urban sites appear to have influenced these differences. This analysis may also reflect the differences in the social relationships and activities of rural and urban dwellers in Delaware during the late-nineteenth and early-twentieth centuries.

The analysis of the Cazier site data has implications for future regional historical archaeological research and methodologies. At the Cazier site, the excavation of a 25 percent random sample of the plow zone gave a reliable view of artifact distributions and spatial utilization patterns. This technique has proved invaluable to other excavated sites within the region as well (Shaffer et al. 1988; Catts and Custer 1990; Hoseth et al. 1990; De Cunzo et al. 1992). Future analysis at other sites using artifact distribution frequencies generated through a 25 percent sample can clarify diachronic spatial utilization of sites.

Soil chemical analysis of the plow zone and subsoil provided an additional dimension to the study of intra-site structure. Soil analysis, intact feature patterns, and artifact distributions provided a more complete understanding of site usage through time.

Analysis of the mortar fragments recovered from structural related features provided relative time periods of construction of the Cazier site buildings. This data alone did not provide exact time of construction, but was used to confirm dates provided by historical written and oral documentation, feature and artifact analysis. The analysis of mortar and plaster was developed and used with some success at the Allen site (Basalik, Brown and Tabachnick 1988). Mortar analysis has the potential to provide relative construction dates of additions and repairs. Mortar and plaster samples should be taken from sealed features, or directly from different walls of foundations and additions. More work is needed to refine this analytical technique.

Architectural historians discovered that comparisons of first-floor dimensions indicates dwellings and structures functioned historically as status symbols (Herman 1987a). The archaeological remains of foundations and structural posts provided a new source of information, as they represent buildings that do not survive as standing structures. The use of house dimension comparisons as indicators of the social class and status of a site's occupants within a community has been successfully used at other sites in the region (Catts, Hodny and Custer 1989; Catts and Custer 1990; Hoseth et al. 1990). Additional archaeological excavations at various types of domestic sites will provide a continuum of ranked house dimensions available for comparisons.

The difference-of-proportion analysis of glass and ceramic vessel function was used to measure the relative economic value of household assemblages thus, the economic status of the site's inhabitants. Statistical comparison of the vessel count percentages of each vessel type, rather than comparing straight vessel percentages, provided a more accurate interpretation and reflects a truer picture of economic status.

The growing data base provided by each new archaeological site and the insights offered by the data recovery excavations of the Cazier site can be used for comparisons. Then, the analytical techniques used in this report can be refined, modified or expanded to provide a clearer picture of past lifeways.

The data recovery excavations at the Cazier site (7NC-F-64) revealed at least three tenant occupations of the Cazier gate-house. Reconstruction of each households' domestic strategies was attempted utilizing data from the artifact assemblages, the distribution of the plow zone artifacts, soil chemistry, mortar composition, and the archaeological structural remains. Architectural and vessel function analysis comparisons with other tenant and black-occupied sites in the Middle Atlantic revealed diachronic and synchronic changes in diet, refuse, and consumption patterns. Information gained from these analyses have added to the growing data base concerning nineteenth and twentieth century rural tenant lifeways.

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APPENDIX I

TOTAL ARTIFACT COUNTS

	PHASE I/II	PHASE III SURFACE	PLOW ZONE	SUB-SOIL
CERAMICS				
Redware	382	59	1,954	5
Creamware/ Pearlware/Whiteware/ Ironstone/Yellow-ware/Rockingham	75 1,520	4 280	260 11,483	7 158
Stoneware	37	13	226	5
Porcelain	68	12	545	6
Colonoware	1	--	--	--
Pipe Stem/Bowl	17	1	--	1
Unidentified	41	--	--	4
TOTAL Phase I/II	2,101			
GLASS				
Window	1,010	33	8,028	148
Bottle	1,500	109	6,837	?
Jar	19	5	--	?
Table/Lamp/Milkglass	331	5	1,409	1
Pressed and/or Decorative	4	--	--	--
Household	--	7	--	7
Mirror	2	--	--	--
Insulator	2	--	--	--
Unidentified	41	55	--	27
PERSONAL				
Button	13	2	--	1
Coin	1	--	--	--
Onament/Toy	18	2	--	--
Leather	12	--	--	--
Jewelry	1	--	--	--
Clasp	3	--	--	--
Unidentified	2	--	--	--
ARCHITECTURAL				
Brick (fragments)	1,107	--	1,023	--
Brick (grams)	--	--	41,022	611
Brick (glazed frags.)	22	--	--	--
Nails (wrought/cut wire/unidentified)	1,329	42	9,158	179
Staple	7	--	--	--
Mortar/Plaster	724	2	--	7
Wood	5	--	--	--
Unidentifiable Metal	--	24	--	--

APPENDIX I (cont.)

	PHASE I/II	PHASE III SURFACE	PLOW ZONE	SUB-SOIL
ARCHITECTURAL (cont.)				
Spike	2	--	--	--
Slag	4	--	--	--
Concrete	--	1	--	--
MISCELLANEOUS				
Metal	57	10	--	24
Metal Tableware	--	1	--	--
Drawer knob	1	--	--	--
Bone	103	19	--	6
Shell	128	1	--	4
Plastic	2	--	--	--
Slate	3	1	--	--
Coal	1	--	--	--
Lime	40	--	--	--
Nutshell	1	--	--	--
Bullet Casing	--	1	--	--
Unidentifable Items	2	--	--	--
PREHISTORIC	12	--	71	--

The complete catalog sheets for the Cazier site are available upon request:

Delaware Department of Transportation
Location and Environmental Studies
P.O. Box 778
Dover, DE 19903
(302) 739-3826

University of Delaware Center for Archaeological Research
101 Ewing Hall
Newark, DE 19716
(302) 831-1193

APPENDIX II

SOUTH'S CERAMIC TYPE NUMBER SYSTEM

PORCELAIN

5	1800-1835	1817.5	Canton porcelain
7	1790-1825	1808.1	Overglaze enamelled China trade porcelain
26	1660-1800	1730	Overglaze enamelled Chinese export porcelain
31	1745-1795	1770	English porcelain, underglzed
39	1660-1800	1730	Underglaze blue Chinese porcelain
41	1750-1765	1758	"Littler's Blue" (on white salt-glazed stoneware, porcelain, and stoneware)
69	1574-1644	1609	Chinese porcelain, underglaze blue, Late Ming
83	1840-1895	1867.5	Parian

STONEWARE

Brown

1	1820-1900	1860	Brown stoneware bottles for ink, beer, etc.
46	1700-1810	1755	Notingham stoneware (Lustered)
52	1700-1775	1738	Burslem "crouch" pale brown stoneware mugs
53	1690-1775	1733	Brown salt-glazed mugs (Fulham)
54	1690-1775	1733	British brown stoneware (excluding 1, 52, & 53)
66	1620-1700	1660	Deteriorated Bellarmine face bottles (one dated example to the 1760s)
74	1550-1625	1588	Bellarmine, brown salt-glazed stoneware, well molded human face
75	1540-1600	1570	Rhenish brown-glazed sprigged, mould-decorated, Cologne type stoneware

Blue, Gray

44	1700-1775	1738	Westerwald, stamped blue floral devices, geometric designs
58	1635-1765	1700	Sprig molding, combed lines, blue and maganese decorated Rhenish stoneware
59	1690-1710	1700	Embellished Hohr gray Rhenish stoneware
77	1700-1775	1738	Westerwald chamber pots

White

16	1740-1765	1753	Moulded white salt-glazed stoneware
24	1723-1775	1749	Debased "Scratch blue" white salt-glazed stoneware
30	1755-1765	1760	Transfer printed white salt-glazed stoneware
34	1740-1775	1757.5	"Scratch blue" white salt-glazed stoneware
40	1765-1795	1780	White salt-glazed stoneware (mugs), thick
40.1	1744-1775	1759.5	White salt-glazed stoneware (mugs), thin
41	1750-1765	1758	"Littler's blue" (on white salt-glazed stoneware, porcelain, and creamware)
43	174401775	1759.5	White salt-glazed stoneware plates
48	1715-1775	1725	Slip-dipped white salt-glazed stoneware
55	1720-1730	1725	"Scratch brown or trailed" white salt-glazed stoneware

APPENDIX II (cont.)

STONEWARE (cont.)

Other

3	1805-1900	1852.5	Ironstone and granite china
27	1750-1820	1785	"Black basaltes" stoneware
28	1763-1775	1769	Engine-turned unglazed red stonewares
37	1690-1775	1733	Refined red stoneware, unglazed, sprigged
50	1732-1750	1741	Ralph Shaw, brown, slipped stoneware

EARTHENWARE

Slipware

56	1670-1795	1733	Lead glazed slipware (combed yellow) (staffordshire)
63	1650-1710	1680	North Devon sgraffito slipware
67	1612-1700	1656	Wrotham slipware
68	1630-1660	1645	"Metropolital" slipware
70	1610-1660	1635	Red marbelized slipware
73	1580-1625	1603	Wanfried slipware
82	1670-1795	1732.5	Sgraffito slipware

Refined

2	1820-1900+	1860	Whiteware
2.1	1830-1875	1852.5	Whiteware, annular
2.2	1890-1930	1910	Whiteware, gild-edged decoration
2.3	1830-1860	1845	Whiteware, blue shell-edged
2.4	1845-1885	1865	Whiteware, molded (embossed)
2.5	1825-1860	1842.5	Whiteware, hand painted fine line and broad line polychrome
2.6	1830-1860	1845	Whiteware, hand painted monochrome blue
2.7	1830-1865	1847.5	Whiteware, spatterware/sponged
2.8	1840-1870	1855	Whiteware, stamped/cut sponge
2.9	1830-1865	1847.5	Whiteware, blue transfer-print
2.10	1835-1870	1852.5	Whiteware, flow blue transfer-print
2.11	1825-1875	1850	Whiteware, other transfer prints
6	1830-1875	1852.5	Whiteware, mocha
29	1740-1780	1760	"Jackfield" ware
33	1759-1775	1767	Green glazed cream-bodied ware
36	1740-1780	1760	"Clouded" wares, tottoiseshell, mottled glazed cream-colored ware, whieldon ware
42	1740-1775	1757.5	Refined agate ware (sgraffito)
51	1725-1750	1738	"Astbury" ware, white sprigged and trailed
78	1790-1840	1815	Luster decorated wares
79	1830-1940	1885	Yellowware
80	1812-1900	1856	Rockingham, American

APPENDIX II (cont.)

EARTHENWARE (cont.)

Coarse

35	1750-1810	1780	Coarse agate ware (excluding doorknobs)
38	1745-1780	1763	Iberian storage jars
47	1720-1775	1747.5	Buckley ware
61	1650-1775	1713	North Devon gravel tempered ware
81			Redware, American

Tin-enamelled

21	1775-1800	1780	Debased Rouen faience (c. 1755 on french sites)
32	1730-1830	1780	Pedestal-footed type delft ointment pot
45	1700-1800	1750	Everted rim, plain delft ointment pot
49	1570-1802	1686	Decorated delftware
57	1750-1800	1775	Plain delft wash basins
60	1710-1740	1725	Mimosa pattern delft
62	1620-1720	1670	English delftware (blue dash chargers)
64	1630-1700	1665	Cylindrical delft ointment pots
65	1640-1802	1721	Plain white delftware
71	1620-1775	1698	Delft apothecary jars (monochrome)
76	1660-1800	1730	Delft chamber pots

Creamware

8	1790-1820	1805	"Finger-painted" wares (polychrome slip on creamware or pearlware)
14	1780-1815	1798	"Annular wares" creamware
15	1775-1820	1798	Lighter yellow creamware
18	1765-1810	1788	Overglaze enamelled hand painted creamware
22	1762-1820	1791	Creamware
23	1765-1815	1790	Transfer printed creamware
25	1762-1780	1771	Deeper yellow creamware
41	1750-1765	1758	"Littler's blue" (on white salt-glazed stoneware, porcelain, and creamware)

Pearlware

4	1820-1840	1830	Underglaze polychrome pearlware, directly stenciled floral patterns, bricht blue, roange, green pinkish red
6	1799-1830	1814.5	Mocha
8	1790-1820	1805	"Finger-painted" wares (polychrome slip on creamware or pearlware)
9	1800-1820	1810	Embossed feathers, fish scales, etc. on pearlware
10	1795-1840	1818	"Willow" transfer-pattern on pearlware
11	1787-1830	1808.5	Transfer-printed pearlware
12	1780-1835	1807.5	Underglaze hand painted polychrome pearlware
13	1790-1839	1810	"Annular wares" pearlware
17	1780-1830	1805	Underglaze monochrome hand painted pearlware
19.1	1780-1830	1805	Pearlware, Blue Shell-edged
19.2	1800-1830	1815	Pearlware, Green Shell-edged
20	1780-1830	1805	Undecorated pearlware

APPENDIX III

SUMMARY OF FEATURE DESCRIPTIONS, AND MEAN CERAMIC DATES

Feature Number	Midpoint Coordinate	Dimensions	Depth	Description/ Interpretation	Mean Ceramic Date including Redware	Mean Ceramic Date excluding Redware
1	S4.4 E98	1.2'	0.2'	burned tree/root/shrub	1860	1860
2	S8 E100.5	0.7'	1.5'	circular post hole; flat bottomed; south fenceline		
3	S7 E104.9	1.0'	1.3'	square post hole; ciruclar post mold		
4	S13.5 E110.5	1.2' x 1.4'	2.5'	square post hole	1810.5	1852
5	S8.4 E96.4	1.3' x 1.2'	1.9'	square post hole; circular post mold; south fenceline	1860	1860
6	S8.5 E108	1.0' x 1.6'	0.4'	rectangular post hole; support post; south fenceline		
7	S9.2 E103.1	1.0' x 1.3'	1.0'	circular post hole; south fenceline		
8	S7.5 E109	0.9'	0.9'	circular post hole; south fenceline		
9	S8.5 E92.6	1.3' x 1.1'	0.9'	square post hole; south fenceline		
10	S8 E111.5	1.0'	0.75	square post mold; south fenceline	1860	1860
11	S9 E111.5	1.0'	1.25	circular post hole; south fenceline	1830	1860
12	S9 E110.5	1.6'	1.4'	circular post hole; south fenceline		
13	S10 E87.2	1.2'	1.1'	circular post hole; south fenceline		
14	S9.2 E94.7	0.9'	1.1'	square post hole; circular postmold; south fenceline		
15	N0.8 E83.3	1.0' x 0.8'	0.6'	square post hole; central fenceline		
16	S5 E77.6	0.7' x 0.4'	0.3'	small oval; noncultural		
17	N0.1 E98	0.8'	0.5'	circular post hole		
18	S4.2 E72.7	1.0' x 0.7'	0.6'	square post hole; circular post mold		
19	N1.3 E101.3	1.4' x 0.7'	1.5'	rectangular post hole		
20	S9 E83.3	0.2' x 0.8'	0.9'	square post hole; circular post mold; south fenceline		
20A	S9 E82.5	0.9' x 0.8'	0.5'	square post hole; circular post mold; south fenceline		
21	N0 E107.5	1.4' x 1.2'	1.2'	post hole		
22	N7 E105.3	0.6' x 0.8'	0.8'	rectangular post hole		
23	S10 E85.5	1.1' x 1.2'	0.9'	square post hole; south fenceline		
24	S2.3 E67	0.5'	0.6'	circular post hole; west fenceline A		
25	N2.4 E67.3	1.5' x 1.1'	1.4'	square post hole; circular post mold; west fenceline A		
26	N19.2 E69.6	1.1' x 0.8'	0.9'	oval possible post hole		
27	N7.3 E66	0.7' x 0.6'	0.8'	square post hole; square pos tmold; west fenceline A		
28	N3.8 E62.7	2.3' x 2.0'	1.6'	square post hole; square post mold; west fenceline B	1842.2	1862
29	N9.8 E66.6	1.0' x 0.7'	0.6'	square post hole; west fenceline A		
30	N53.9 E63.4	1.9' x 1.4'	2.0'	square post hole; circular pos tmold; west fenceline B		
31	N10.6 E66.2	0.8' x 0.6'	0.7'	circular post mold; square post hole; west fenceline A		
32	N25 E118	18.0' x 17.0'	3.0'	structure foundation and cellar		
33	N18.5 E109.5		1.2'	builder's trench; west wall		
34	N13.5 E62.4	1.1' x 1.0'	1.4'	square post hole; west fenceline B		
35	N16.3 E65.8	1.0' x 1.0'	1.6'	square post hole; square post mold; west fenceline A	1830	1850
36	N31 E97	7.0' x 6.5'	0.5'	amorphous; 20th century privy	1852.6	1856
37	N52 E70	6.0' x 5.0'	0.8'	amorphous; trash midden	1845.8	1855
37A	N50 E70	6.0' x 5.0'	0.8'	amorphous; trash midden		1857
38	N68 E56	9.0' x 7.0'	0.7'	amorphous	1849.4	1857
39	N16 E75	2.0' diameter	0.8'	circular trash pit		
40	N42.5 E67.8	0.7' x 0.8'	0.3'	square post hole		
41	N26 E87.5	1.5' x 1.3'	1.1'	circular support post; Outbuilding I; east wall		
42	N43.3 E63.9	0.6' x 0.6'	0.1'	square post hole		
43	N28 E99.3	1.0'	0.7'	circular support post; West Addition	1855.6	1855

APPENDIX III (cont.)

Feature Number	Midpoint Coordinate	Dimensions	Depth	Description/ Interpretation	Mean Ceramic Date including Redware	Mean Ceramic Date excluding Redware
44	N40.4 E68.8	0.6'	0.25'	square post hole		
45	N17 E90	0.8'	0.7'	oval post hole; central fenceline	1856.9	1857
46	N17 E87	0.7' X 0.9'	0.7'	oval post hole; central fenceline	1860	1860
47	N22.5 E86.5	0.8' diameter	1.6'	circular structural post hole; southeast corner; Outbuilding I	1845.4	1853
48	N23 E78.5	1.0' x 0.7'	1.5'	square structural post mold; rectangular post hole; southwest corner; Outbuilding I	1837.5	1856
49	N10 E83.5	1.3' diameter	1.9'	circular post hole; central fenceline		
50	N6.5 E84	0.8' diameter	0.6'	circular post hole; central fenceline	1852.5	1852
51	N11.5 E62.5	1.0' x 1.0'	1.4'	square post hole; west fenceline B	1860	1860
52	N5 E59	2.4' x 1.1'	1.6'	rodent; noncultural		
53	N8 E47	1.3'	1.2'	oval; noncultural		
54	N37 E92.5	2.3' x 1.7'	0.5'	rectangular trash pit	1852.5	1852
55	N29 E87	1.0'	1.1'	square post hole; circular post mold; structural post; east wall; Outbuilding I	1852.5	1852
56	N35.8 E87	1.0' x 0.8'	1.2'	rectangular post hole; circular post mold; northeast structural post; Outbuilding I	1845	1856
57	N15.8 E108.9	1.2' x 0.9'	1.2'	rectangular post hole; circular post mold; southeast structural post; West Addition	1839.6	1879
58	N23 E92.5	1.1' x 1.0'	0.8'	circular post mold; square post hole	1863.2	1863
59	N20 E100	1.2' x 0.7'	1.2'	oval post hole; west wall; structural post; West Addition	1820	1860
60	N15.8 E108	1.0' 1.0'	1.0'	square structural post hole; southeast corner; West Addition	1866.9	1867
61	N31.1 E109.3	1.1' x 1.2'	1.0'	square structural post hole; east wall; West Addition; post hole and post mold	1840.3	1840
62	N32.5 E108.8	0.7' x 0.6'	0.6'	square structural post hole; northeast corner; West Addition		
63	N31.1 E109	0.9' x 0.6'	0.6'	square structural post hole; northeast corner; West Addition		
64	N16.7 E109	1.1'	1.0'	square structural post hole; southeast corner; West Addition	1847.1	1856
65	N58 E62	10.0' x 10.0'	1.5'	amorphous; trash midden	1833.5	1858
66	N19.3 E66.3	0.5' diameter	0.5'	circular post hole; west fenceline A	1855	1855
67	N18.3 E62.5	2.0' x 1.5'	1.7'	square post hole; square post replacement; west fenceline B	1860	1860
68	N22 E62.5	1.0'	0.8'	rectangular post hole; west fenceline B	1805	1805
69	N14.7 E92	1.4' diameter	0.6'	circular post hole; central fenceline	1835	1835
70	N74.4 E72.9	1.2' x 1.5'	1.4'	circular post hole and post mold; north fenceline	1857.5	1857
71	N76 E73.5	1.4' x 1.4'	0.5'	square support post hole; north fenceline	1837.5	1856
72	N25.5 E62.5	1.4' x 1.6'	1.3'	square post hole; circular post mold; west fenceline B	1820	1860
73	N25.5 E67.9	0.9' x 0.8'	0.3'	plant/root	1852.5	1852
74	N12.5 E59	0.6' diameter	0.5'	circular; possible plant		
75	N4 E93.5	0.8' x 0.9'	0.4'	circular hole filled with charred coffee beans		
76	N33.2 E62.2	1.2' x 1.4'	1.1'	square post hole; circular post mold; west fenceline B	1840	1860
77	N75.2 E101.4	0.6' diameter	1.2'	post hole; north fenceline	1856.2	1856
78	N35.5 E62	1.4' x 1.2'	1.4'	square post hole; circular post mold; west fenceline B	1860	1860
79	N9 E100.2	0.7' diameter	1.3'	circular post hole	1845	1860
80	N5.4 E100.2	0.8' x 0.5'	1.5'	oval post hole		1870
81	N11.3 E101	1.1' x 0.9'	0.9'	square post hole	1830	1860
82	N4.5 E94.6	1.0' x 1.1'	0.6'	square; possible post hole	1842.5	1870
83	N17.6 E95.5	0.8' x 1.3'	0.3'	rectangular; possible support post hole	1851.7	1858
84	N18.5 E96.5	0.5'	0.8'	triangular; possible post hole	1860	1860
85	N17 E100.5	1.3' x 1.4'	1.5'	structural post hole; southwest corner; West Addition		
86	N17.2 E102.6	1.0' x 0.9'	0.7'	support post hole; West Addition	1868.8	1869
87	N18.5 E103.5	1.5' x 0.9'	0.8'	support post hole; West Addition	1860	1860
88	N16 E102	0.6' diameter	0.4'	support post hole; West Addition		

APPENDIX III (cont.)

Feature Number	Midpoint Coordinate	Dimensions	Depth	Description/ Interpretation	Mean Ceramic Date including Redware	Mean Ceramic Date excluding Redware
89	N11.5 E97	1.0' X 1.0'	0.8'	square post hole	1828.1	1856
90	N11 E85	0.7' X 0.4'	0.65'	rodent disturbanc	1860	1860
91	N77 E67.8	2.4' X 2.0'	0.3	small trash pit	1849.7	1850
92	N36 E63.9	1.4' X0.9'	1.3'	square post hole; circular post mold; west fenceline A	1819.7	1852
93	N74.4 E68.7	1.6' X 1.2'	1.6'	rectangular post hole; north fenceline	1800	
94	N75.2 E108.8	1.4' X 1.5'	1.5'	circular post hole; circular post mold; north fenceline	1847.5	1866
95	N72.5 E108.3	0.6' diameter	0.2'	plant/root		
96	N41 E61.7	1.3' x 0.9'	1.3'	oval post hole; west fenceline B	1840	1860
97	N37.4 E53	0.9' x 0.8'	0.9'	square post hole; circular post mold		
98	N13 E93.6	1.5' x 1.0'	0.6'	oval; rodent disturbance		
99	N23.7 E91	1.2' x 0.8'	1.1'	square post hole; square post mold; flat bottomed; central fenceline		
100	N35 E89.5	1.9' x 1.1'	1.2'	rectangular post hole; circular post mold; possible replacement post; northest corner; Outbuilding I	1860	1860
101	N62 E119.6	1.2' x 1.0'	0.2'	plant/root	1805	1805
102	N75.4 E66.5	1.3'	0.9'	circular post hole; north fenceline	1800	
103	N42.2 E58.5	0.7' diameter	1.2'	circular post hole; west fenceline B		
104	N49 E89	1.7' x 1.1'	1.5'	square post hole; circular post mold; central fenceline		
105	N44 E87.8	0.7' x 0.6'	1.0'	oval; possible plant/root		
106	N43 E62.4	1.4' x 0.9'	1.2'	square post hole; circular post mold; west fenceline B	1860	1860
107	N79.5 E47.5	0.8' diameter	0.9'	plant/root	1855	1855
108	N80.7 E51	1.1' x 1.0'	3.0'	square; plant/root/rodent		
109	N63.4 E115.6	1.7' x 1.3'	1.7'	square post hole	1853.6	1861
110	N29 E61.9	0.9' x 0.6'	1.1'	oval post hole; west fenceline B	1860	1860
111	N27.3 E62.7	1.0' x 0.9'	0.9'	square post hole; west fenceline B		
112	N78.6 E56.9	1.0' diameter	0.7'	possible root/plant		
113	N61.3 E100	2.5' x 1.7'	1.3'	circular post hole; circular post mold	1860	1860
114	N27.5 E65.1	0.8' x 1.0'	1.2'	square post hole; square post mold; west fenceline A	1860	1860
115	N26.7 E64.9	0.8' x 0.8'	0.7'	square post hole; square post mold; west fenceline A		
116	N25.1 E64	0.8' x 0.8'	0.6'	square post hole; circular post mold; west fenceline A	1820	1860
117	N24.4 E65.3	0.8' x 0.8'	0.5'	square post hole; circular post mold; west fenceline A	1802.5	1805
118	N63.6 E88.7	0.5' diameter	0.6'	circular post hole		
119	N64.1 E85.6	1.2' x 1.0'	1.1'	oval post hole	1860	1860
120	N77 E45.3	1.2' x 0.6'	0.3'	amorphous stain; possible plant/root		
121	N23.8 E21	0.9' x 0.8'	0.7'	rectangular support post hole; west wall; West Addition		
122	N25.5 E23	1.8' x 1.5'	1.5'	rectangular post hole; circular post mold; center support post; West Addition	1830	1860
123	N25 E100.7	1.6' x 1.1'	1.6'	rectangular structural post hole; west wall; West Addition		
124	N31.5 E105	1.4' x 1.0'	1.5'	circular post hole; circular post mold; center support post; West Addition	1844.2	1853
125	N32.9 E104.5	1.3' x 1.0'	0.8'	circular support post hole; north wall; West Addition; has a rodent disturbance	1852.5	1852
126	N33 E106	1.1' x 0.9'	1.0'	oval structural post hole; north wall; West Addition	1852.5	1852
127	N34.4 E104.5	1.5' x 1.3'	0.8'	rectangular post		
128	N85.5 E44.7	0.4' diameter	0.4'	possible plant/root		
129	N66.3 E84	0.8' diameter	0.2'	circular; domestic cat burial		
130	N31.4 E75.9	0.9' x 0.9'	1.1'	square post hole; circular post mold; structural; west wall; Outbuilding I	1830	1860
131	N31.1 E78.6	0.6' x 0.5'	0.4'	square support post hole; west wall; Outbuilding I		
132	N28.6 E78.7	0.8' x 0.7'	1.5'	square post hole; square post mold; structural; west wall; Outbuilding I		
133	N30.3 E106.5	1.5' x 1.1'	1.2'	square post hole; circular post mold; center support post; West Addition	1852.3	1866

APPENDIX III (cont.)

Feature Number	Midpoint Coordinate	Dimensions	Depth	Description/ Interpretation	Mean Ceramic Date including Redware	Mean Ceramic Date excluding Redware
134	N64.8 E80.4	0.8' x 0.6'	0.4'	oval post hole		
135	N75.5 E80	2.6' x 2.0'	1.1'	circular post hole; replacement post; north fenceline	1860	1860
136	N34.8 E76.8	1.1' x 0.7'	0.2'	support post hole; northwest corner; Outbuilding I	1848.7	1857
137	N35.4 E78.9	0.6'	1.2'	circular structural post hole; north wall; Outbuilding I		
138	N36.6 E77.4	0.8' x 0.8'	1.0'	square post hole; circular post mold; support post; north wall; Outbuilding I		
139	N35.4 E75.9	1.0' x 1.0'	1.1'	square post hole; circular post mold; northwest corner; structural post; Outbuilding I	1860	1860
140	N36.2 E75.4	0.9'	1.2'	square post hole; circular post mold; northwest corner; replacement post; Outbuilding I	1855	1855
141	N68.8 E80.5	2.5' x 1.6'	0.8'	post hole; shed/pen	1860	1860
142	N3.8 E98.5	1.3' x 1.4'	0.4'	square post hole	1828	1828
143	N6.8 E93.7	1.0' x 1.1'	0.5'	square post hole	1800	
144	N75 E86.4	1.5' x 1.3'	0.5'	amorphous; plant/root	1855	1855
145	N30.5 E103.3	1.5' x 1.3'	1.3'	square support post hole; square support post mold; center; West Addition		
146	N46.3 E108	1.1' x 1.1'	0.8'	square post hole; square post mold	1822.5	1856
147	N74.8 E88.3	1.5' x 1.6'	0.7'	circular post hole; north fenceline	1805	1805
148	N70.2 E80.2	0.8' x 0.8'	1.4'	square; plant/root		
149	N70 E81.7	1.0' x 0.8'	0.4'	circular; plant/root		
150	N77.8 E88.7	1.4' x 1.2'	2.1'	oval; plant/root		
151	N39.3 E108.4	2.6' x 1.5'	0.7'	small rectangular trash pit	1844.3	1844
152	N34.7 E87.8	1.1' x1.0'	0.2'	circular; domestic cat burial		
153	N46 E108.2	2.4' x 2.0'	0.6'	small oval trash pit	1858.4	1861
154	N45 E106.7	1.1' diameter	2.0'	circular; burned post/tree?		
155	N35.5 E90	0.7' x 0.7'	0.5'	square post hole; central fenceline	1860	1860
156	N57.2 E84	1.9' x 1.2'	2.5'	oval; burned tree?		
157	N42.6 E99.6	0.7' diameter	1.9'	circular post hole; central fenceline		
158	N50 E108.7	0.6' x 0.5'	0.7'	square; root/plant		
159	N10.6 E98.4	0.4' diameter	0.3'	circular; post hole/root?		
160	N31.9 E101.2	0.8' x 0.7'	0.5'	square support post hole; northwest corner; West Addition		
161	N38.7 E66.2	0.8' diameter	0.5'	circular; plant/root		
162	N32.8 E100.5	0.6' diameter	1.3'	circular structural post hole; northwest corner; West Addition		
163	N96.5 E52	2.6' x 1.7'	1.1'	rectangular; rodent disturbance		
164	N91 E54.5	1.9' x 1.4'	0.6'	burned tree/rodent?		
165	N26 E108	0.6' x 0.6'	0.3'	square support post hole; center; West Addition		
166	N63.4 E76.6	1.0' diameter	0.6'	circular; possible post hole	1860	1860
167	N59 E76.4	1.0' x 1.2'	0.8'	circular post hole; square post mold	1850	1850
168	N15.8 E105	0.7' x 0.8'	1.9'	square structural post hole; south wall; West Addition	1818.1	1818.1
169	N65.9 E61.9	1.2' x 1.2'	1.4'	square post hole; circular post mold; west fenceline B	1860	1860
170	N72 E64	6.0' x 5.0'	0.7'	circular; 19th century privy hole		
171	N68.6 E61.5	1.2' x 1.2'	1.3'	square post hole; circular post mold; west fenceline B	1856.2	1856.2
172	N71.7 E61	1.1'x 1.5'	0.7'	post hole; west fenceline B	1846.2	1846.2
173	N34 E94.6	5.0' x1.5'	0.6'	20th century privy	1851.2	1851.2
174	N29 E100.3	1.3' x0.7'	0.6'	support post hole; west wall; West Addition		
175	N14 E115	8.0' x 3.5'	2.9'	bulkhead entrance	1873.2	1885
176	N15.2 E121.6	8.0' x 0.4'	2.7'	south wall; builder's trench; east portion		
177	N32.8 E118	16.3' x 0.2'	0.7'	north wall; builder's trench		
178	N69.8 E66.2	0.8' x 0.3'	0.3'	post hole; west fenceline dogleg		

APPENDIX III (cont.)

Feature Number	Midpoint Coordinate	Dimensions	Depth	Description/ Interpretation	Mean Ceramic Date including Redware	Mean Ceramic Date excluding Redware
179	N36.5 E113.3	0.5' diameter	1.8'	circular post hole		
180	N68.4 E66	1.8' x 1.5'	1.2'	post hole; west fenceline dogleg; privy	1840	1840
181	N15.3 E120.9	0.5' 0.3'	1.3'	support post hole for porch		1841
182	N68.7 E73.8	1.1' x 1.1'	1.3'	circular post hole; square post mold; shed/pen	1824.5	
183	N16 E110.5	3.9' x 0.5'	2.3'	south wall; builder's trench; west portion		
184	N38.7 E114.7	1.1' x 1.0'	0.9'	square post hole		
185	N74.7 E71.6	1.0' x 0.7'	0.5'	support post hole; north fenceline		
186	N9 E108	1.2' diameter	1.2'	circular post hole; circular post mold; possible association with porch	1852.5	1852.5
187	N44.2 E116.6	0.9' x 0.4'	0.5'	possible plant/root		
188	N41.6 E113.2	0.8' x 0.6'	0.4'	square post hole		
189	N34.9 E112.5	0.6' diameter	0.6'	circular post hole		
190	N43.3 E115.3	1.2' x 0.9'	0.4'	square post hole off north wall builder's trench (Feature 177)		
191	N70 E70	6.5' x 6.0'	0.3'	gray clay possible floor of shed/pen	1832.5	1832.5
192	N67.2 E72.8	2.5' x 1.2'	1.0'	rectangular post hole; circular post mold	1847.7	1859
193	N10 E114.5	2.1' diameter	1.4'	circular post hole; circular post mold; structural post; porch	1845	1856
194	N9.4 E118.7	2.0' diameter	1.4'	porch support post hole	1855	1855
195	N9.5 E123	2.4' diameter	1.7'	porch support post hole	1835.8	1854
196	N40 E125.1	1.9' x 1.1'	1.0'	circular post hole; circular post mold		
197	N48.4 E125.5	1.4' x 1.1'	0.6'	possible post hole	1852.5	1852.5
198	N6 E113.2	1.4' x 0.7'	0.8'	possible post hole	1900	1900
199	N16 E116	3.1' x 0.7'	---	cement threshold	1860	1860
200	N9.4 E18.4	10.0' x 0.4'	0.4'	sill associated with porch post holes		
201	N71.5 E71.7	0.9' x 0.8'	0.7'	square post hole; circular post mold; shed/pen	1860	1860
202	N74.3 E76	1.2' x 1.8'	1.6'	oval post hole; square post mold	1850	1850
203	N67.9 E76.3	1.1' x 1.1'	1.1'	square post hole; circular post mold; shed/pen	1860	1860
204	N71.2 E66	1.0' x 0.9'	0.6'	square post hole; circular post mold; west fenceline dogleg		
205	N49.7 E61.8	1.8' x1.1'	1.2'	oval post hole; 2 circular post molds; west fenceline B		
206	N64.2 E128.3	3.0' diameter	0.9'	noncultural		
207	N25 E126			chimney base		
208	N12 E115	1.0' x 0.5'	2.4'	suppport post hole for bulkhead entrance		

APPENDIX IV

GLOSSARY

Aeolian - Carried by the wind.

Alluvium - Deposits of gravel, sand, and soil which are transported by flowing water.

Archaeology - The study of the people of the past through the recovery and analysis of the artifacts they left behind and their context.

Archival Research - Research done at places in which public or historical records, charters and documents are stored and preserved.

Artifact - Any object shaped or modified by man, or as a result of human activity.

Assemblage - The array of contemporaneous objects and associations found at an archaeological site.

Auger - A large tool for boring holes deep in the ground.

Bay - The subdivision longitudinally of a building by piers, arches, girders, etc.

Colluvium - A loose deposit of rock debris accumulated at the base of a cliff or slope.

Cross-section - A transverse of a portion of a feature, horizontally and vertically removing soil from one section.

Culture - A uniquely human system of habits and customs acquired by man through a non-biological, uninherited process, learned by his society, and used as his primary means of adapting to his environment.

Datum - A point used as a reference, as in surveying.

Deciduous - Leaf bearing trees that shed in autumn.

De Facto - In reality or fact.

Detritus - Particles of rock or other material worn or broken away from a mass, as by the action of water or glacial ice; any disintegrated material; debris.

Diachronic - Referring to two or more reference points in time.

Diagnostic - An artifact that can clearly be dated and/or identified as to maker, date, place or origin, etc.

Dripline - A slight trench or depression left in the soil where a roof overhang was present.

Extant - Still in existence.

Fallow Field - A plowed but unplanted field.

Feature - Any soil disturbance or discoloration that reflects human activity, or an artifact that, being too large to remove from a site, normally is recorded only; for example, house, storage pits, etc.

Fluvial - Produced by the action of flowing water.

Hinterland - The land directly adjacent to and inland from a coast. Also a region remote from urban areas; back country.

Historic - The time period after the appearance of written records. In the New World, this generally refers to the time period after the beginning of European settlement at approximately 1600 A.D.

Historical Archaeology - The study of material culture in an historical perspective.

Hole-set Post - Posts set directly in the ground connected by sills.

Humus - Soil, usually on top of the ground, that contains a large proportion of rotted and rotting vegetable material.

Hundred - A subdivision of some English and American counties.

Hypothesis - A tentative assumption made in order to draw out and test its logical or empirical consequences.

In Situ - In the original place.

Interface - A surface regarded as the common boundary of two bodies or spaces.

Intersite - Between sites; often used in the context of comparison.

Intestate - A person who dies without making a will.

Intra-site - Within a site.

Kinship - Socially recognized relationships based on real or imagined descent and marriage patterns.

Loam - A loose soil composed of roughly equal parts of silt, clay, and sand, especially a kind containing organic matter and of great fertility.

Locus - A defined archaeological site or testing location.

Material Culture - That segment of man's physical environment which is purposely shaped by him according to culturally dictated plans.

Mean Ceramic Date - A date obtained from the study of historic ceramics recovered from a site that approximates the median occupation date of the site.

Midden - A refuse heap.

Mitigate - To make or become less severe or intense by excavating.

Orphans Court Records - The County Court responsible for the welfare of orphans when a father died without a will. Orphans Court watched over the estate until the children (if any) reached majority. A guardian was appointed by the Court, who was to make periodic returns of the estate to the Court. When the youngest heir came of age, then the property could be divided among the heirs. These court records are filled with information regarding income property, education, repairs of houses and outbuildings, contracts, and other useful material about eighteenth and nineteenth century life.

Pedestrian Survey - The walking and collecting of an archaeological site without the excavation of subsurface units.

Pedogenic - The development of soils in place.

Perch - A measure of distance and acreage used by early surveyors, equal to 16.5 feet. Also called a pole, rod, or rood. A perch is equal to one-quarter of a chain, which is 66 feet long, and eighty chains equals 1 mile, or 5,280 feet. Finally 1 acre is composed of 10 square chains, or 43,560 feet.

Plow Zone - In a plowed field, the upper layer of organic soil which is continually reworked by the plow. In the Middle Atlantic region this is about 8-12 inches.

Post and Tie-beam Pairs - Prefabricated units consisting of two opposite upright posts tied together by a connecting horizontal beam.

Post Hole - A hole dug in the ground into which a post is placed.

Post Mold - The organic stain in the ground which is left by a decayed wooden post. A post mold stain may occur inside of a post hole stain on an archaeological site.

Probate - The official proving of a will as authentic or valid.

Profile - A side view of a feature or test unit.

Research Design - A strategy developed at the beginning of a project to guide the researchers.

Reverse Assembly - When, in construction of aisled buildings, the wall plate is carried on the end of the tie-beam which in turn is carried on the post.

Sherd - A piece of broken pottery.

Shim - A thin, often tapered piece of material, as metal, wood or stone, used as a leveler or filler between materials such as stone or metal.

Sill - The horizontal member that bears the upright portion of a frame.

Socioeconomic - Applies to the inter-relationship between economic wealth (or poverty) and social position or status.

Soil Horizon - Soils are divided into 3 horizons, which reflect different kinds of chemical and physical processes that have resulted from changing climatic conditions.

Strata - The various layers of human or geological origin which comprise archaeological sites.

Stratigraphy - The examination of the soil layering on an archaeological site; the characteristics of each individual stratum and its relationship to others in the sequence is critical to understanding the temporal and spatial characteristics of the site.

Stud - An upright post in the framework of a wall for supporting sheets of lath, wall board, or similar material.

Subsoil - Sterile, naturally occurring soils not changed by human occupation.

Subsurface - Below the surface, not visible from the surface.

Surface Collection - Act of walking along a surface such as an open field or plowed field, and collecting artifacts seen on the surface of the ground.

Synchronic - Referring to a single period in time.

Tax Assessment Error List - It is a supplementary tax assessment list made after the initial tax assessment to correct errors.

Tie-beam - The horizontal beam which connects two opposite upright posts.

Tie-beam Pair - Two opposite upright posts (connected by a tie- beam).

Transect Sampling - A means of archaeological research design in which the sampling element is a square or rectangular grid.

Waster - Broken or otherwise damaged bricks or ceramics generally discarded after manufacture.

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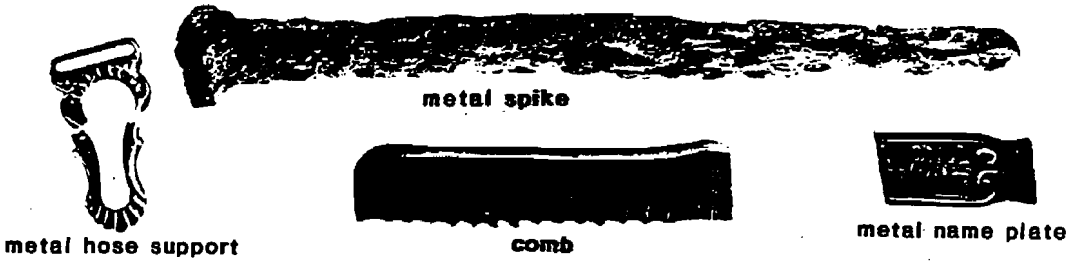

APPENDIX V

PUBLIC INFORMATION HANDOUT: HISTORIC ARCHAEOLOGY RESEARCH PROGRAM AT THE JACOB B. CAZIER TENANCY SITE NO. 2 (7NC-F-64)

A historic cultural resource mitigation program is being conducted by the Delaware Department of Transportation, Division of Highways, and the Federal Highway Administration in conjunction with the University of Delaware Center for Archaeological Research at the Cazier Tenancy site in New Castle County, Delaware.

The Jacob B. Cazier Tenancy Site No. 2 is located in Pencader Hundred, New Castle County, Delaware on the west side of Delaware Route 896, 2800 feet south of Denny Road (Route 396) and 1000 feet north of the Chesapeake and Delaware Canal. The site consists of a single mid-nineteenth to early twentieth century tenant house foundation with associated cultural materials present in the surrounding plow zone soils and sub-plow zone cultural features.

The tenant structure is illustrated on only one map source, the 1906 USGS Wilmington Quadrangle Topographic Sheet, which depicts its location immediately north of the driveway entrance to Mount Vernon Place, the mid-nineteenth to early twentieth century residence of gentleman farmer Jacob B. Cazier. Mount Vernon Place was built by Cazier in 1859 and he lived there until his death in 1918. The ownership of the property was transferred to George L. Townsend in 1921. The tenant structure was demolished shortly thereafter, as aerial photos of the vicinity in 1937 show no evidence of it.

Local residents of the area with an interest in local history provided information that the tenant house was the residence of a black retainer for Jacob Cazier during the late 1800s and early 1900s. Mr. Ronald Ogden reported in particular that the man had been the carriage-driver for Cazier and that his last name was Stevenson.

The excavation of the Cazier Tenancy site will contribute data important in the understanding of the history of this area and surrounding region. It can yield data for comparison with other nineteenth century excavated tenant sites in the region. Perhaps more significantly, however, the Cazier site provides an unusual opportunity to study the spacial patterns and material processes of a black household in Delaware in the nineteenth century.

If you would like further information concerning this cultural resource project, please contact Kevin Cunningham at 739-3826 or Angela Hoseth at 831-1193